Service Manual

ST6000/N1B, /N1G
/U1B, /F1N

Tuner

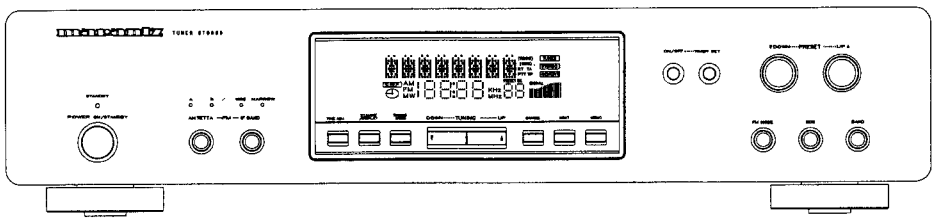

TABLE OF CONTENTS

1. TECHNICAL SPECIFICATIONS 1
2. WIRING DIAGRAM 2
3. BLOCK DIAGRAM 3
4. SCHEMATIC DIAGRAM AND PARTS LOCATION 7
5. MICROPROCESSOR AND IC DATA 19
6. ADJUSTMENT PROCEDURE 21
7. EXPLODED VIEW AND PARTS LIST 23
8. ELECTRICAL PARTS LIST 26

Please use this service manual with referring to the user guide (D.F.U) without fail.
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行って下さい。

marantz®

- ST6000 -

282W855010 AO
3120 785 22160
First Issue:1999.09

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

USA

MARANTZ AMERICA, INC.
440 MEDINAH ROAD
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USA
PHONE : 630 - 307 - 3100
FAX : 630 - 307 - 2687

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SAO PAULO, SP, BRAZIL
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FAX : +55 11 534. 8988

PROFESSIONAL **AMERICAS**

SUPERSCOPE TECHNOLOGIES, INC.
MARANTZ PROFESSIONAL PRODUCTS
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AURORA, ILLINOIS 60504 USA
PHONE : 630 - 820 - 4800
FAX : 630 - 820 - 8103

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633 GRANITE COURT,
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PHONE : 905 - 831 - 6333
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MT. WAVERLEY VIC 3149
AUSTRALIA
PHONE : +61 - 3 - 9543 - 1522
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746 - 754 MAHACHAI ROAD.,
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WO KEE HONG (S) PTE LTD
WO KEE HONG CENTRE
NO.23, LORONG 8, TOA PAYOH
SINGAPORE 319257
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NO. 102 JALAN SS 21/35, DAMANSARA
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神奈川県相模原市相模大野7-35-1
営業本部 〒150-0022
東京都渋谷区恵比寿南1-11-9

KOREA

MK ENTERPRISES LTD.
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,
3GA, HANGANG-RO, YONGSAN-KU, SEOUL
KOREA
PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. TECHNICAL SPECIFICATION

FM Section

Frequency Range ..... 87.50MHz-108.00MHz(50kHz steps)
87.50MHz-108.00MHz(50kHz steps)
76.00MHz-90.00MHz(50kHz steps)
Usable Sensitivity (IHF) ..... Mono : 10dBf
Frequency Response ..... 20Hz~15kHz
+0.5 ~ -3.0dB
T.H.D (at 65dBf, 1KHz) ..... Mono : 0.1%
Stereo : 0.2%
Signal-to-Noise Ratio (at 65dBf, 1kHz) ..... Mono : 70dB
Stereo : 65dB
AM Suppression Ratio 60dB
Stereo Separation (1kHz) 40dB

General

Power Requirements ..... AC 230V ,50Hz (/N1)
AC 120V ,60Hz (/U1)
AC 100V ,50Hz/60Hz (/F1)
Power Consumption 8W
Dimensions (WxHxD) 440x96x311mm
Weight (net) 3.8Kg

MW Section

Frequency Range ..... 522kHz-1622kHz (9kHz step)
520kHz-1710kHz (10kHz step)
Usable Sensitivity (S/N 20dB) 55dBm
Image Response Ratio 35dB
T.H.D (400Hz) 0.8%
Signal-to-Noise Ratio ..... 40dB (at 85dB/m)

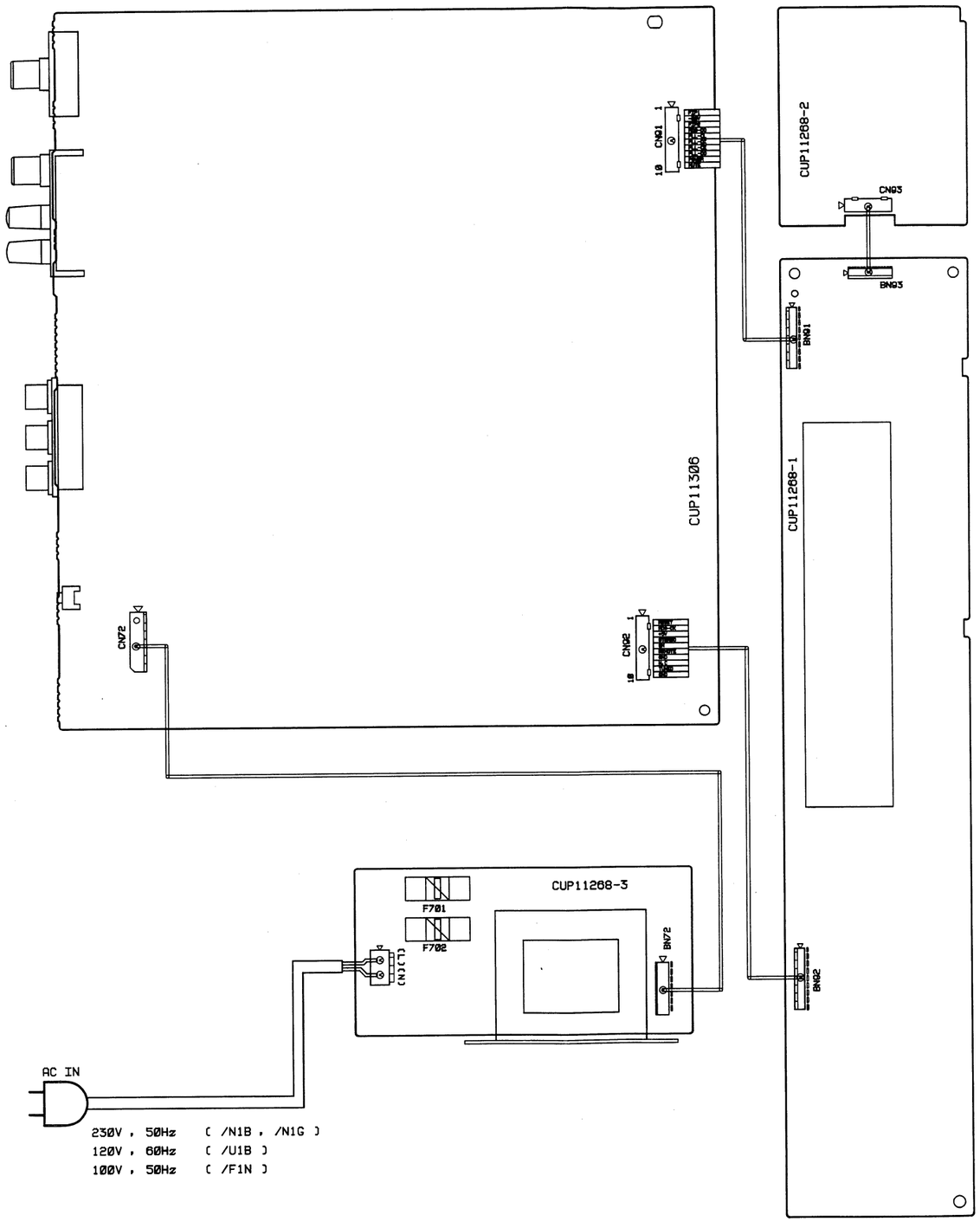
LW Section (/N1 only)

Frequency Range ..... 146kHz-290kHz (1kHz step)
Usable Sensitivity (S/N 20dB) 60dBm
T.H.D (400Hz) 1.0%
Signal-to-Noise Ratio ..... 40dB (at 85dB/m)

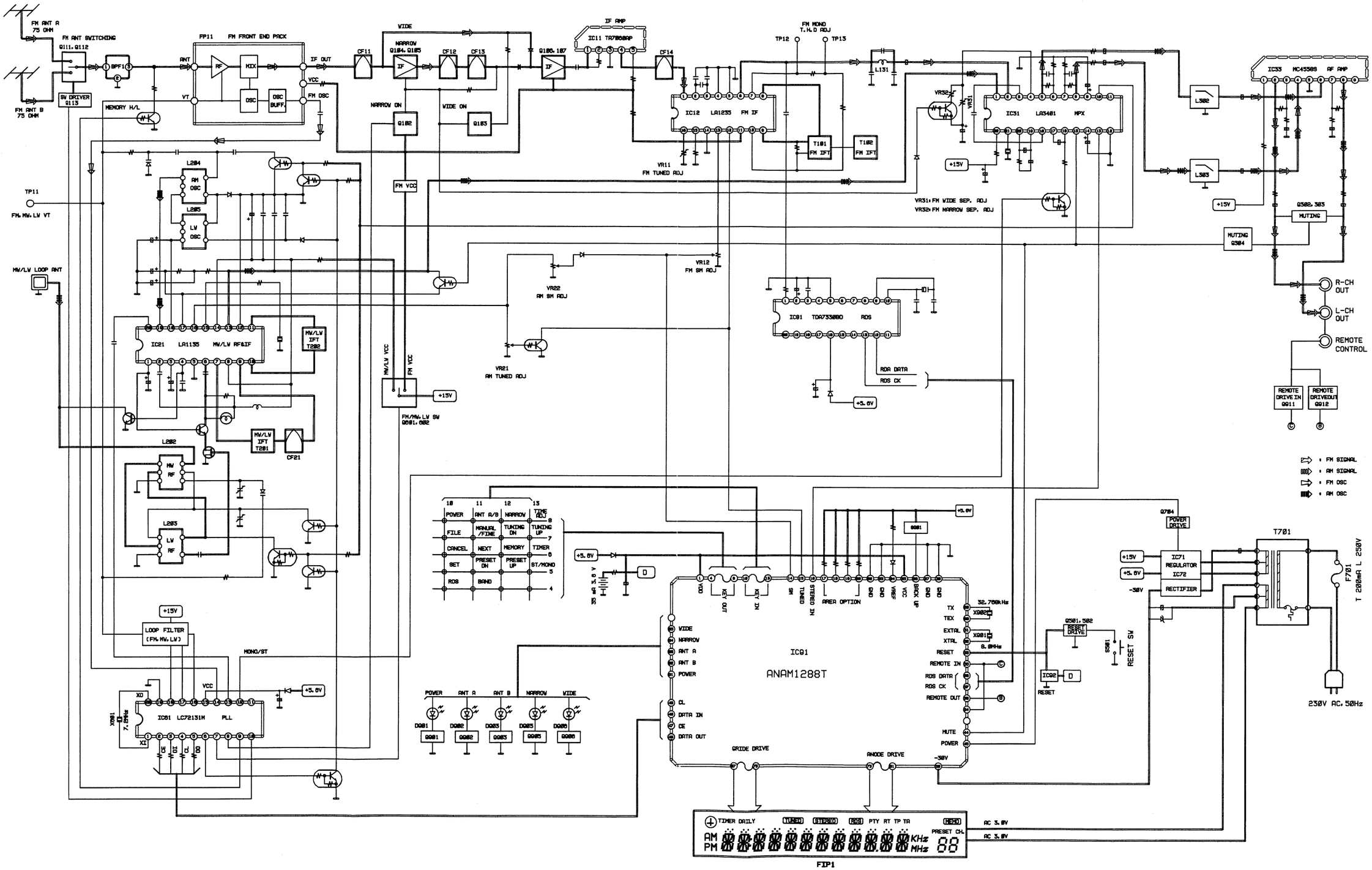
Standard Accessories

Audio signal connection cord 1
Remote control connection cord 1
FM Antenna 1
AM Loop Antenna 1
User Guide 1
Remocon Unit (/U1 , /F1) (RC6000ST) 1
75-300ohm adaptor (/U1 , /F1) 1

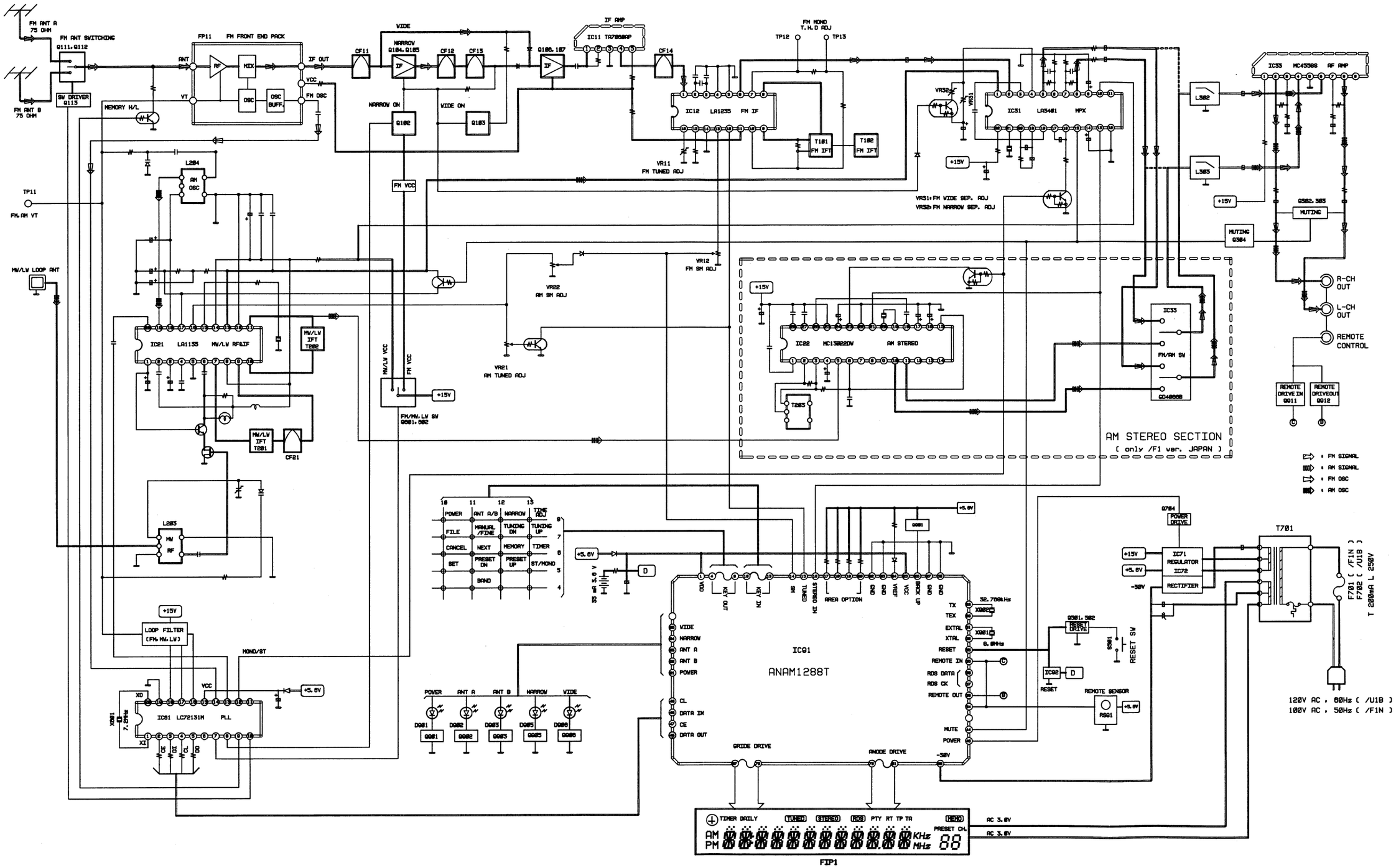
2.WIRING DIAGRAM



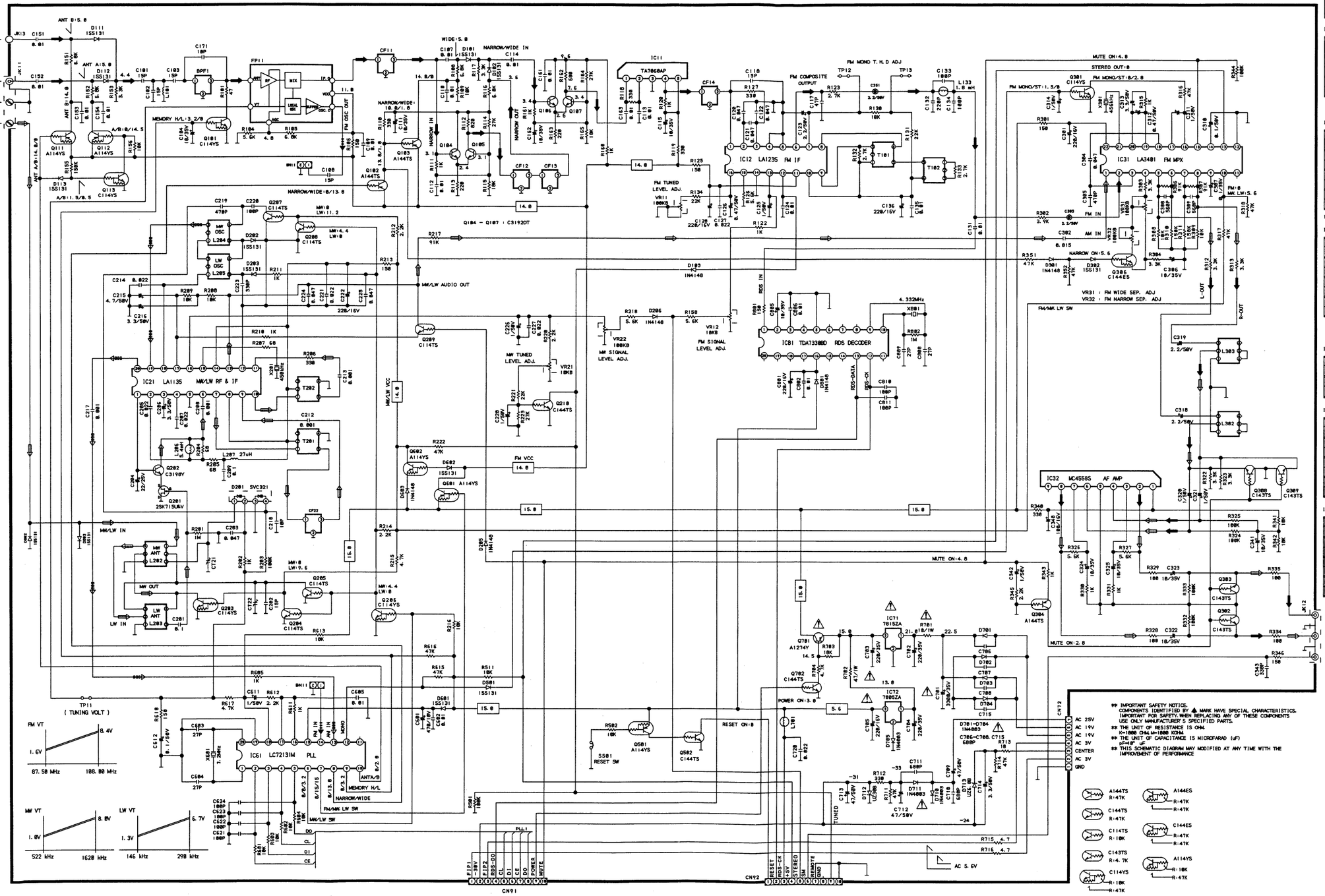
3. BLOCK DIAGRAM (/N1B,/N1G) VERSION



(/U1B,/F1N) VERSION



4. SCHEMATIC DIAGRAM AND PARTS LOCATION (/N1B,/N1G) VERSION



IC11 : TA7858AP

PIN	1	2	3	4	5
VOLT	1.4	1.4	GND	12.8	12.8

IC12 : LA1235

PIN	1	2	3	4	5	6
VOLT	2.8	2.8	2.8	GND	GND	2.8
PIN	7	8	9	10	11	12
VOLT	6.4	6.4	6.4	6.4	18.2	8/5.6
PIN	13	14	15	16		
VOLT	3.8	GND	8.6	3.4		

12:8 (TUNED ON) /5.8 (TUNED OFF)
13:0-4.8 (SIGNAL LEVEL)

IC21 : LA1135

PIN	1	2	3	4	5	6
VOLT	5.8	3.2	8.5	8.3	GND	2.8
PIN	7	8	9	10	11	12
VOLT	8.8	8.8	8.8	8.8	8.8	GND
PIN	13	14	15	16	17	18
VOLT	3.8	8.8	1.3	5.8	3.8	5.2
PIN	19	20				
VOLT	5.2	3.8				

16:0-5.8 (AM SIGNAL LEVEL)

IC31 : LA3481

PIN	1	2	3	4	5	6
VOLT	3.2	3.2	3.2	3.2	5.8	3.2
PIN	7	8	9	10	11	12
VOLT	3.2	5.8	3.2	0	OPEN	GND
PIN	13	14	15	16	17	18
VOLT	8.5	5.8	0	2.8	2.8	2.8
PIN	19	20	21	22		
VOLT	2.8	2.8	455k	11.6		

10:8 (FM) /5.5 (MW,LW)
13:8.5 (STEREO) /5.5 (MONO)

IC32 : MC4558S

PIN	1	2	3	4	5
VOLT	14.8	7.8	7.8	7.8	GND
PIN	6	7	8	9	
VOLT	7.8	7.8	7.8	OPEN	

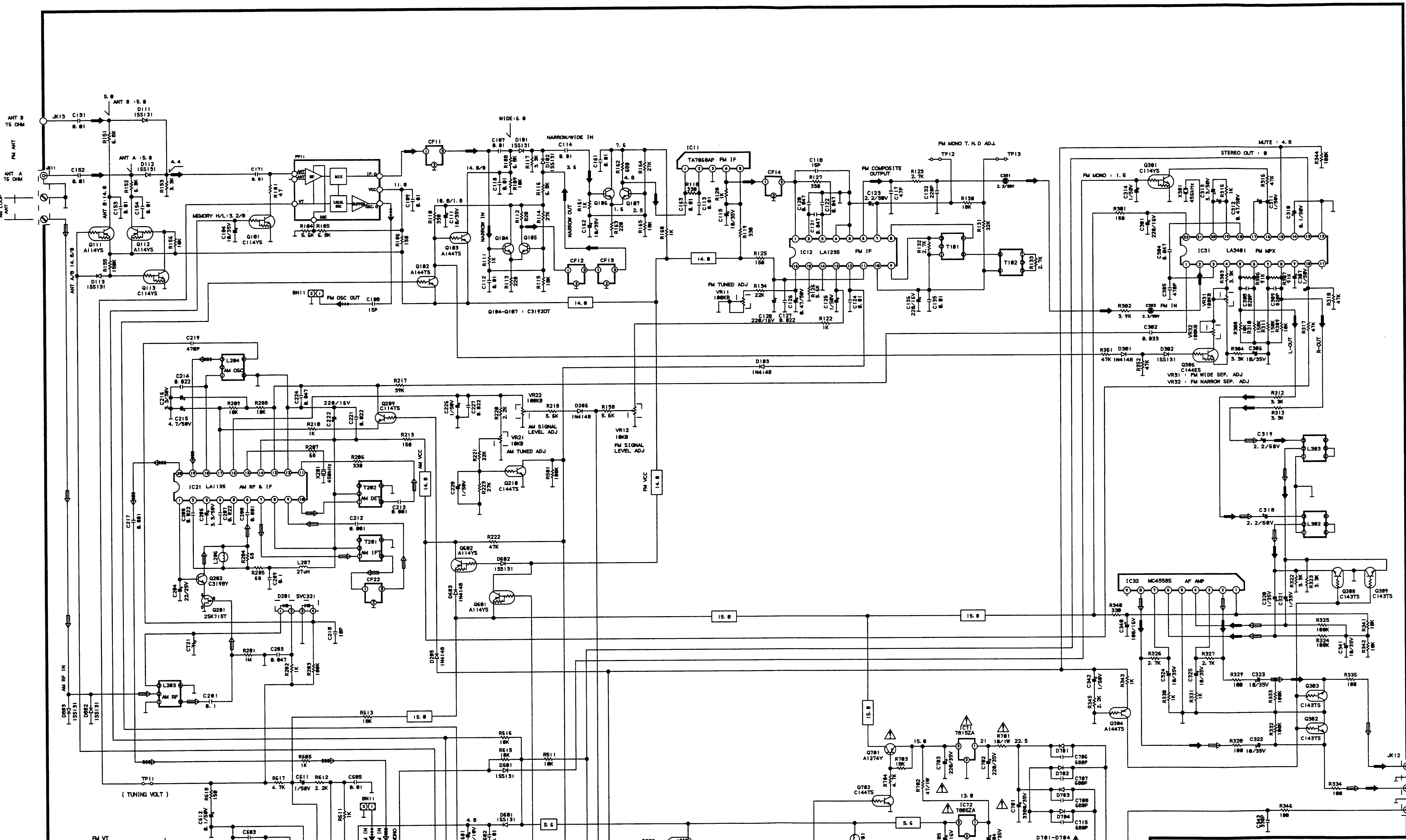
IC61 : LC72131M

PIN	1	2	3	4	5	6
VOLT	7.2M	CE	DI	CL	DO	PIN
PIN	7	8	9	10	11	12
VOLT	PIN	PIN	PIN	PIN	OPEN	PIN
PIN	13	14	15	16	17	18
VOLT	AMIN	FMIN	4.8	8.8	8.8	VT
PIN	19	20				
VOLT	GND	7.2M				

IC81 : TDA7338BD

PIN	1	2	3	4	5	6
VOLT	2.2	2.2	1.5	OPEN	GND	OPEN
PIN	7	8	9	10	11	12
VOLT	OPEN	OPEN	OSC	OSC	OPEN	CLK
PIN	13	14	15	16	17	18
VOLT	DATA	OPEN	OPEN	5.6	OPEN	OPEN
PIN	19	20				
VOLT	OPEN	OPEN				

(/U1B) VERSION



IC11 : TA7060AP

PIN	1	2	3	4	5
VOLT	1.4	1.4	GND	12.0	12.0

IC12 : LA1235

PIN	1	2	3	4	5	6
VOLT	2.0	2.0	2.0	GND	GND	2.0
PIN	7	8	9	10	11	12
VOLT	6.4	6.4	6.4	6.4	10.2	0/6.0
PIN	13	14	15	16		
VOLT	3.0	GND	0.6	3.4		

12:0 (TUNED ON)/6.0 (TUNED OFF)
13:0–4.0 (SIGNAL LEVEL)

IC21 : LA1135

PIN	1	2	3	4	5	6
VOLT	5.0	3.2	0.5	0.3	GND	2.0
PIN	7	8	9	10	11	12
VOLT	0.0	0.0	0.0	0.0	0.0	GND
PIN	13	14	15	16	17	18
VOLT	3.0	0.0	1.3	5.0	3.0	5.2
PIN	19	20				
VOLT	5.2	3.0				

16:0–5.0 (AM SIGNAL LEVEL)

IC31 : LA3401

PIN	1	2	3	4	5	6
VOLT	3.2	3.2	3.2	3.2	5.0	3.2
PIN	7	8	9	10	11	12
VOLT	3.2	5.0	3.2	0	OPEN	GND
PIN	13	14	15	16	17	18
VOLT	0.5	5.0	0	2.0	2.0	2.0
PIN	19	20	21	22		
VOLT	2.0	2.0	456k	11.6		

10:0 (FM)/5.5 (AM)
13:0.5 (STEREO)/5.5 (MONO)

IC32 : MC4558S

PIN	1	2	3	4	5
VOLT	14.0	7.0	7.0	7.0	GND
PIN	6	7	8	9	
VOLT	7.0	7.0	7.0	OPEN	

IC61 : LC72131M

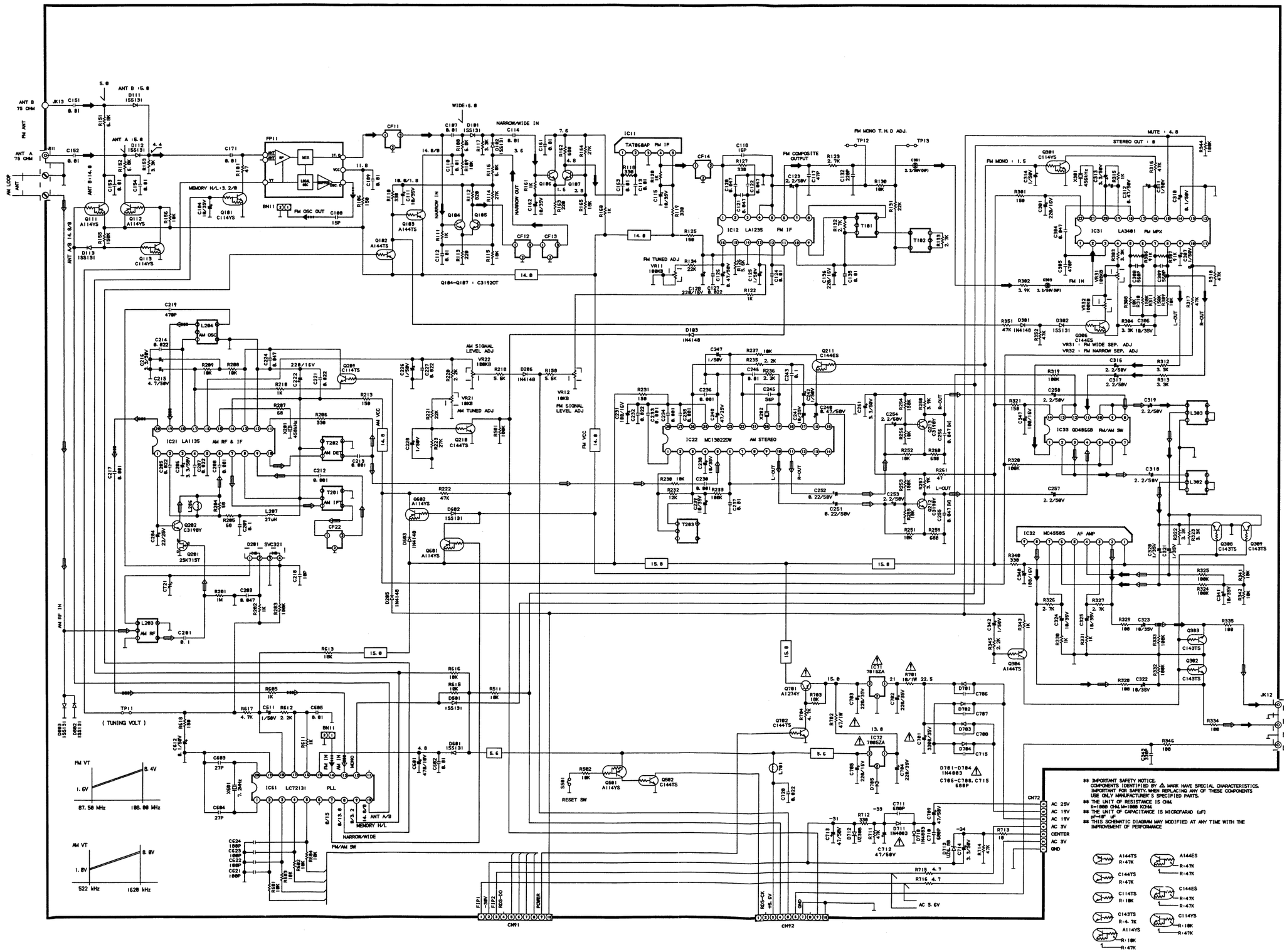
PIN	1	2	3	4	5	6
VOLT	7.2M	CE	DI	CL	DO	PIN
PIN	7	8	9	10	11	12
VOLT	PIN	PIN	PIN	PIN	OPEN	PIN
PIN	13	14	15	16	17	18
VOLT	AMIN	FMIN	4.0	0.0	0.0	VT
PIN	19	20				
VOLT	GND	7.2M				

FM SIGNAL LINE
AM SIGNAL LINE
FM OSC LINE
AM OSC LINE

** IMPORTANT SAFETY NOTICE.
COMPONENTS IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PARTS.
** THE UNIT OF RESISTANCE IS OHM.
K=1000 OHM, M=1000 KOHM.
** THE UNIT OF CAPACITANCE IS MICROFARAD (uF)
pF=10^{-6} uF
** THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE

A144TS R:47K
A144ES R:47K R:47K
C144TS R:47K
A114YS R:10K R:47K
C114TS R:10K
C143TS R:4.7K
C114YS R:10K R:47K
C144ES R:47K R:47K

(/F1N) VERSION



IC11 : TA7868AP

PIN	1	2	3	4	5
VOLT	1.4	1.4	GND	12.8	12.8

IC12 : LA1235

PIN	1	2	3	4	5	6
VOLT	2.8	2.8	2.8	GND	GND	2.8
PIN	7	8	9	10	11	12
VOLT	6.4	6.4	6.4	6.4	10.2	8/6.8
PIN	13	14	15	16		
VOLT	3.8	GND	8.5	3.4		

12:8 (TUNED ON) /6.8 (TUNED OFF)
13:8~4.8 (SIGNAL LEVEL)

IC21 : LA1135

PIN	1	2	3	4	5	6
VOLT	5.8	3.2	8.5	8.3	GND	2.8
PIN	7	8	9	10	11	12
VOLT	8.8	8.8	8.8	8.8	8.8	GND
PIN	13	14	15	16	17	18
VOLT	3.0	8.8	1.3	5.8	3.8	5.2
PIN	19	20				
VOLT	5.2	3.8				

15:8~5.8 (AM SIGNAL LEVEL)

IC22 : MC13022DW

PIN	1	2	3	4	5	6
VOLT	8.8	3.8	3.8	1.7	1.1	2.9
PIN	7	8	9	10	11	12
VOLT	OPEN	OPEN	OPEN	1.1	1.1	OPEN
PIN	13	14	15	16	17	18
VOLT	OPEN	OPEN	2.9	2.5~4	2.3	3.8
PIN	19	20	21	22	23	24
VOLT	OSC	OSC	5/8	GND	3.5	3.8
PIN	25	26	27	28		
VOLT	8.6	3.8	8.8	8.2		

IC31 : LA3401

PIN	1	2	3	4	5	6
VOLT	3.2	3.2	3.2	3.2	5.8	3.2
PIN	7	8	9	10	11	12
VOLT	3.2	5.8	3.2	0	OPEN	GND
PIN	13	14	15	16	17	18
VOLT	8.5	5.8	0	2.8	2.8	2.8
PIN	19	20	21	22		
VOLT	2.8	2.8	456k	11.6		

18:8 (FM) /5.5 (AM)
13:8.5 (STEREO) /5.5 (MONO)

IC32 : MC4558S

PIN	1	2	3	4	5
VOLT	14.8	7.8	7.8	7.8	GND
PIN	5	7	8	9	
VOLT	7.8	7.8	7.8	OPEN	

IC61 : LC72131M

PIN	1	2	3	4	5	6
VOLT	7.2M	CE	DI	CL	DO	PIN
PIN	7	8	9	10	11	12
VOLT	8.8	8.8	8.8	8.8	8.8	GND
PIN	13	14	15	16	17	18
VOLT	AMIN	FMIN	4.8	8.8	8.8	VT
PIN	19	20				
VOLT	GND	7.2M				

IC71 : TDA7330BD

PIN	1	2	3	4	5	6
VOLT	2.2	2.2	1.5	OPEN	GND	OPEN
PIN	7	8	9	10	11	12
VOLT	OPEN	OPEN	OSC	OSC	OPEN	CLK
PIN	13	14	15	16	17	18
VOLT	DATA	OPEN	OPEN	5.6	OPEN	OPEN
PIN	19	20				
VOLT	OPEN	OPEN				

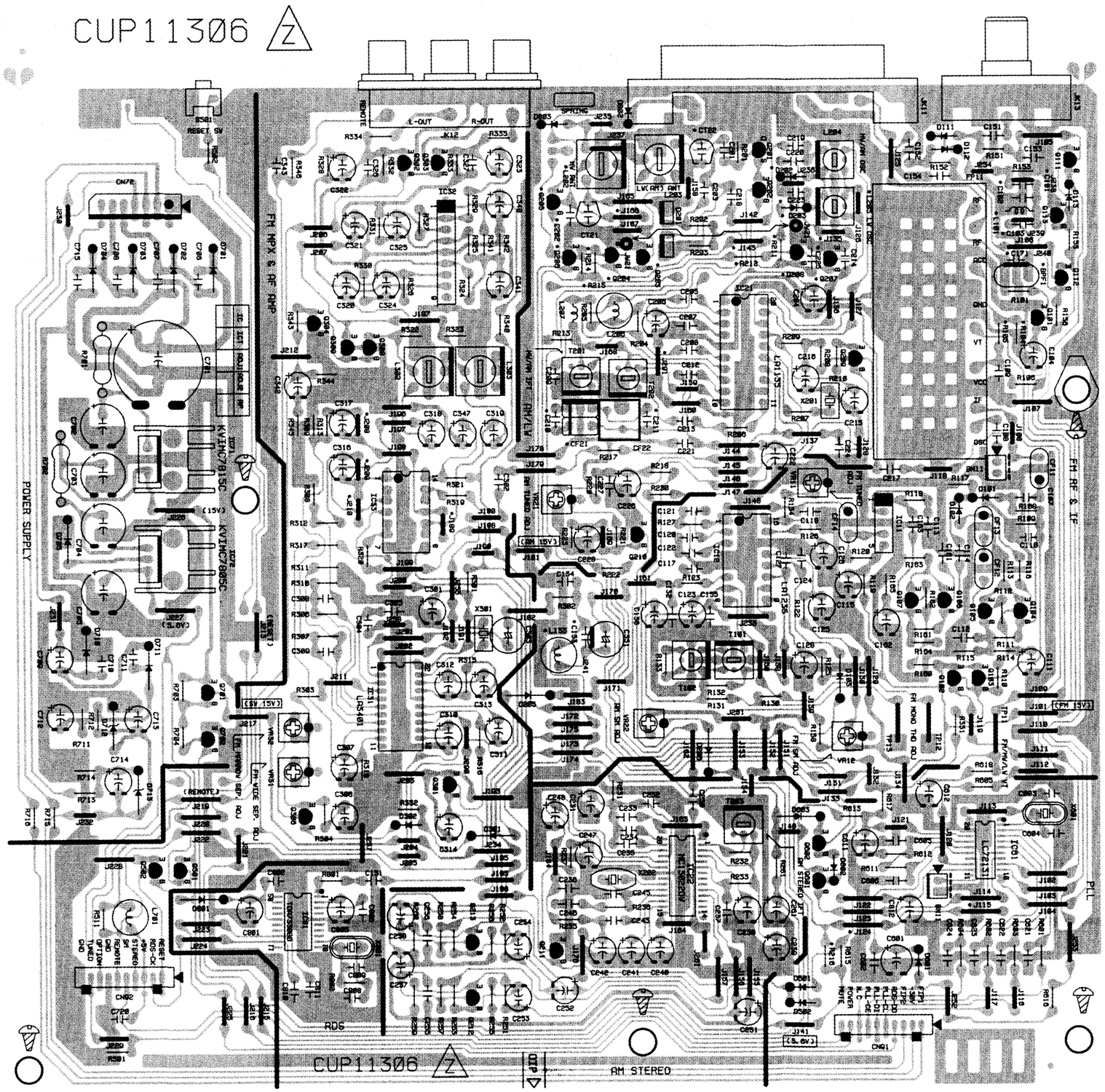
IC71
IC72 Q306
Q701 IC81
Q502 Q501 Q702

IC33 Q302 Q303
IC31 IC32 Q213
Q301 Q212

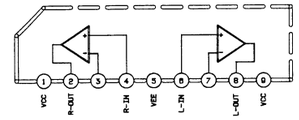
Q205
Q206 Q204 Q203
Q211 Q210

IC21 Q201 Q208 Q207 IC11
IC12 Q202 Q209 Q107
Q602
Q601

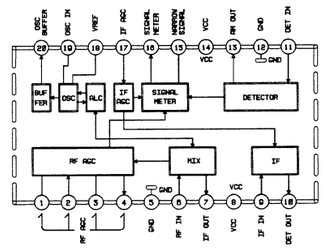
Q106 Q105 Q101 Q111
Q102 Q103 IC61 Q113 Q112
Q104



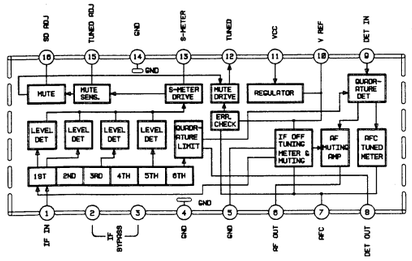
IC32 : MC4558S

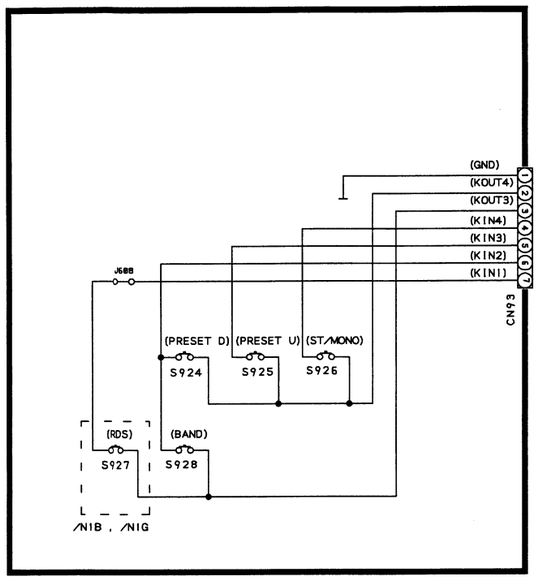


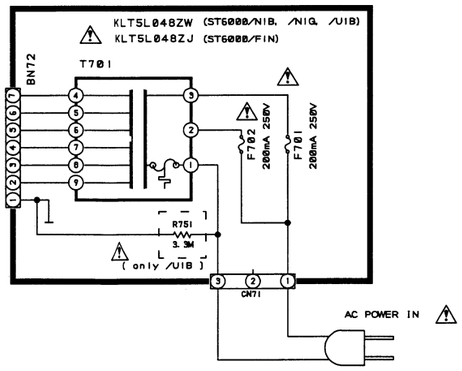
IC21 : LA1135



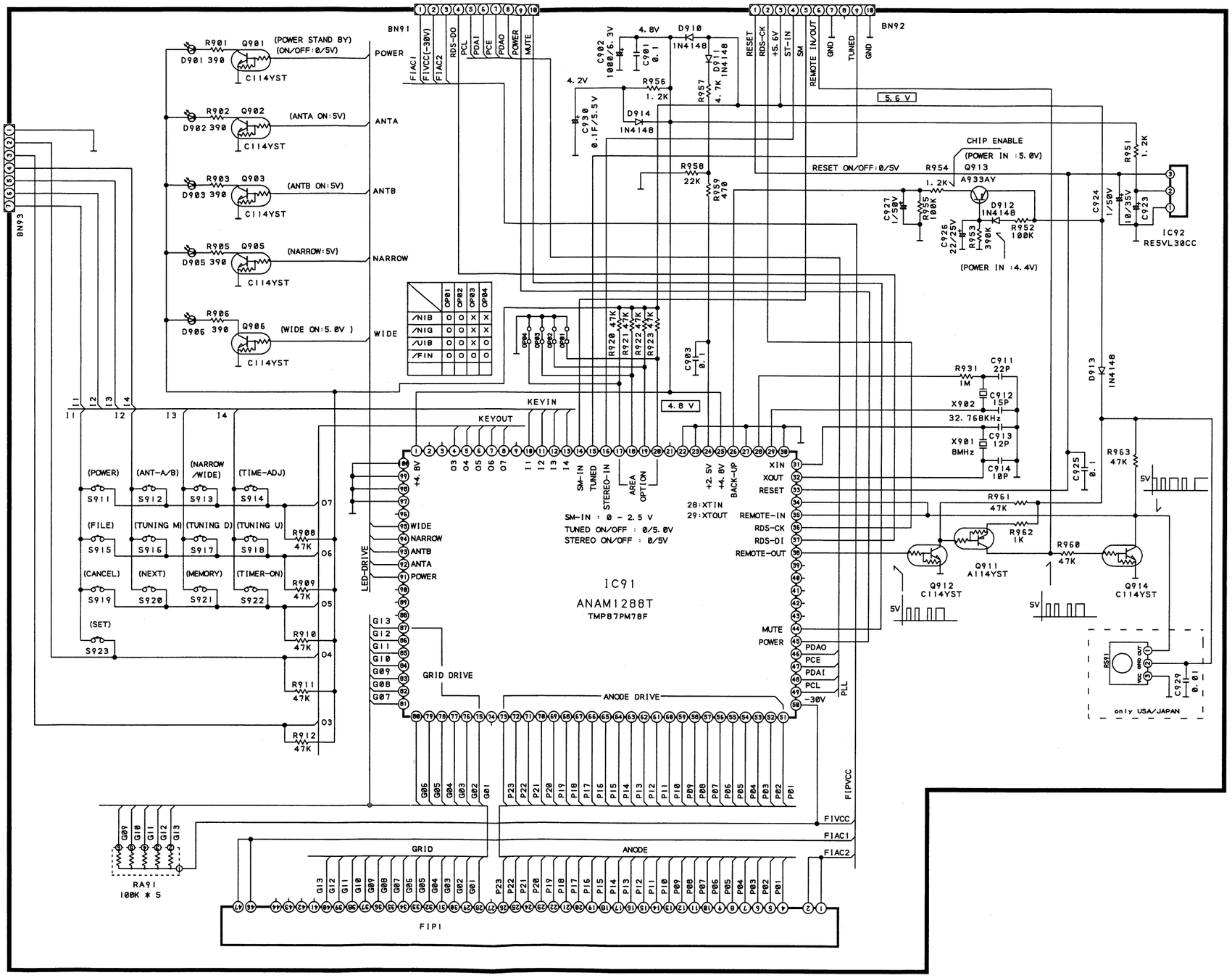
IC12 : LA1235

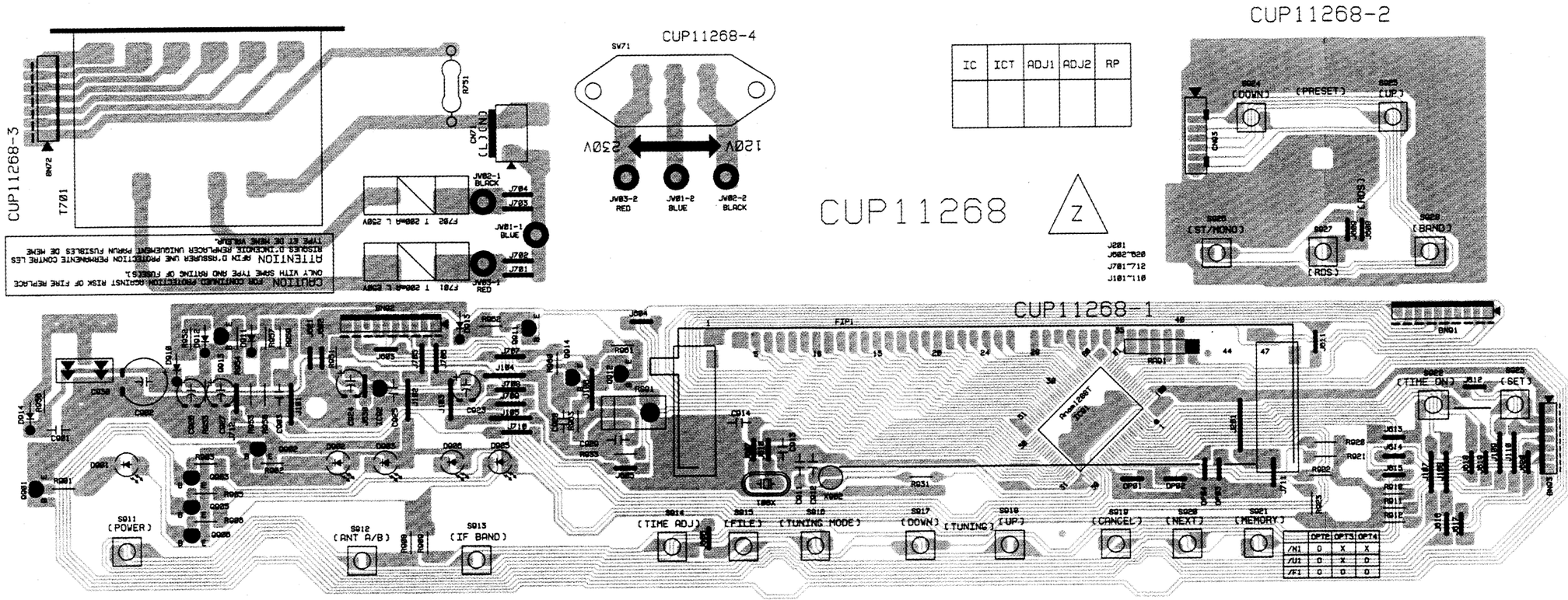






MODEL	AREA	AC POWER IN	F701	F702	SW71	R751
ST6000/NIB ST6000/NIG	Europe	AC 230V , 50Hz	O	X	X	X
ST6000/UIB	USA CANADA	AC 120V , 60Hz	X	O	X	O
ST6000/FIN	JAPAN	AC 100V , 50Hz	X	O	X	X



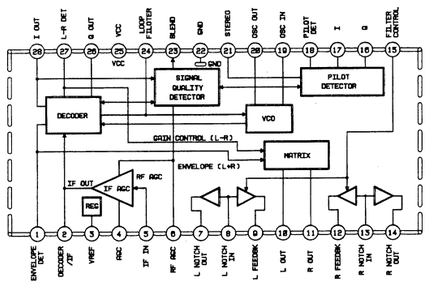


Q901 Q913 IC92
Q903 Q902
Q905
Q906

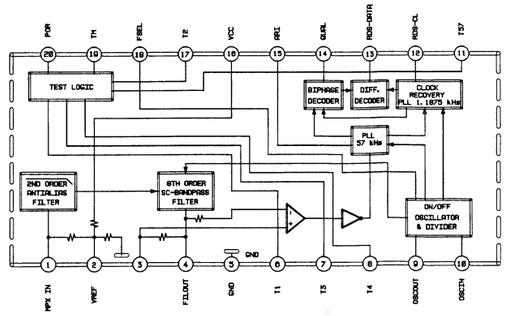
Q911 Q914 Q912

IC91

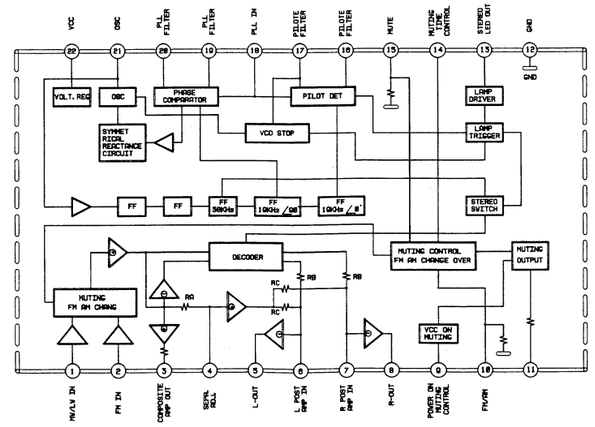
IC22 : MC13022DW



IC80 : TDA7330BD



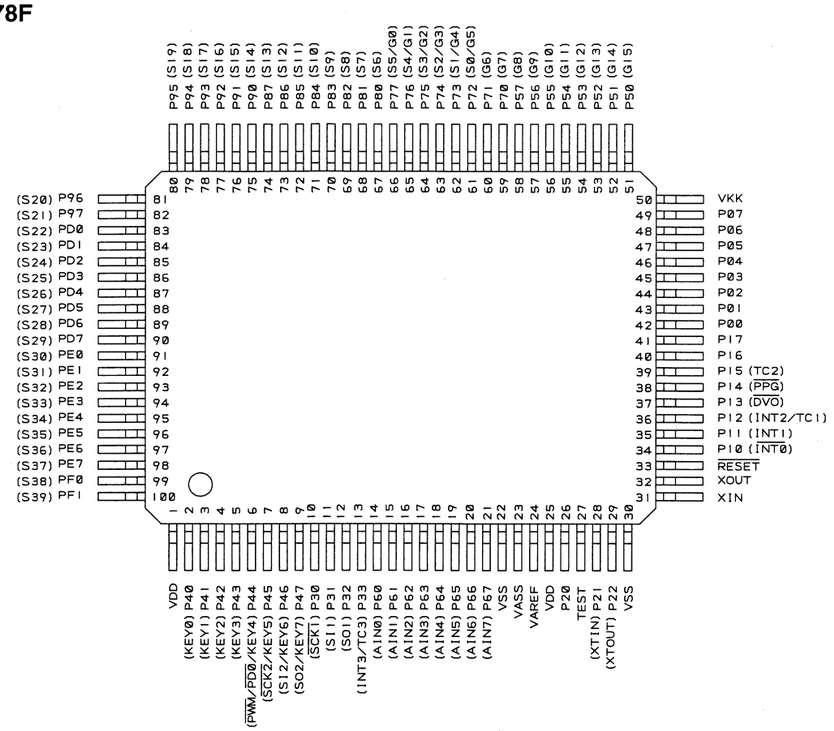
IC31 : LA3401



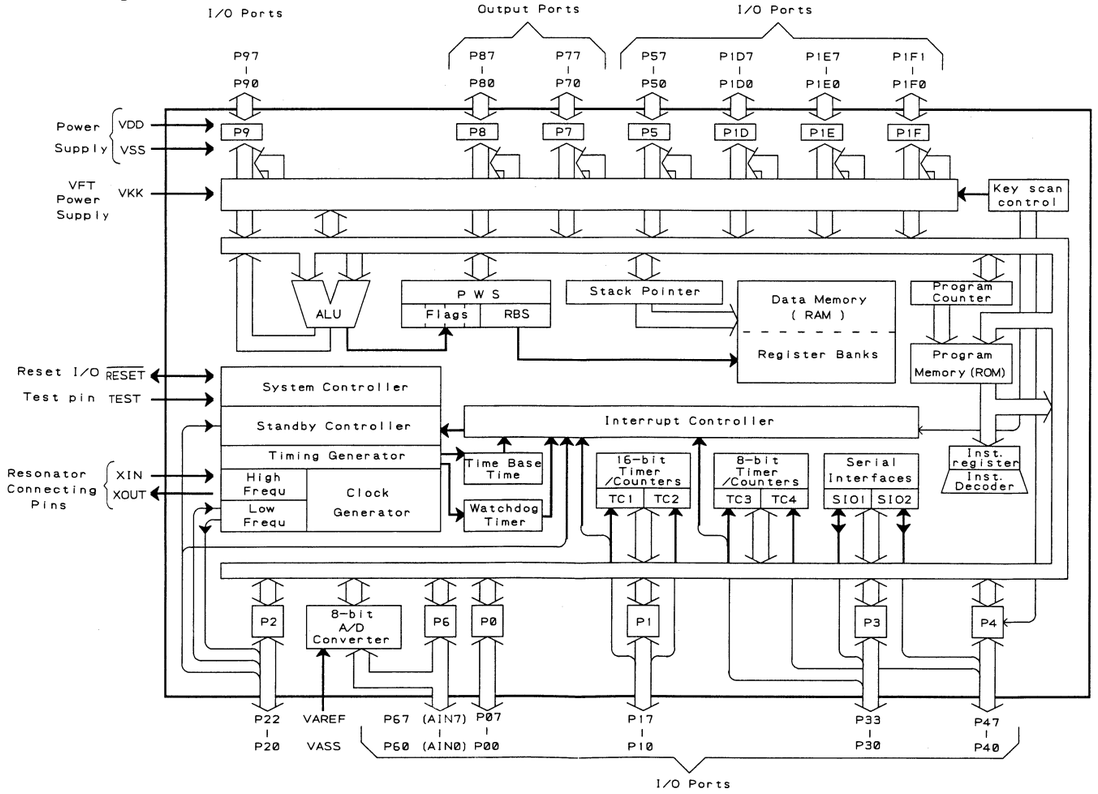
5. MICROPROCESSOR AND IC DATA

IC91 : TMP87PM78F

1. Pin Configuration



2. Block Diagram



3. Pin Functions

PIN NO.	IN/OUT	MARK	DESCRIPTION OF TERMINAL
1	INPUT	VDD(+4.8V)	Power supply terminal
2~3	-		Not used in this unit.
4~8	OUTPUT	D3~D7	Output terminal for key
9	-		Not used in this unit.
10~13	INPUT	I1~I4	Input terminal for key
14	INPUT	SM IN	Signal Meter level IN
15	INPUT	TUNED	TUNED indicator drive
16	INPUT	ST IN	Stereo indicator drive
17~20	INPUT	AREA OPTION	Option terminal for area
21	-		Not used in this unit.
22~23	-	GND	Ground terminal
24	INPUT	VREF	Referance power input terminal
25	INPUT	VDD	Power supply terminal
26	INPUT	BACK-UP(CE)	Power supply detection
27	-	GND	Ground terminal
28	INPUT	IN	Connecting terminal for crystal oscillator.
29	OUTPUT	OUT	The crystal connected is 32.768KHz.
30	-	GND	Ground terminal
31	INPUT	XIN	Connecting terminal for crystal oscillator.
32	OUTPUT	XOUT	The crystal connected is 8.00MHz.
33	INPUT	RESET	System reset terminal
34~35	INPUT	RMC IN	Remote control input terminal
36	INPUT	RDS CLOCK	Clock input terminal for RDS
37	INPUT	RDS DATA	Data input terminal for RDS
38	OUTPUT	RMC OUT	Remote control output terminal
39~43	-		Not used in this unit.
44	OUTPUT	MUTE	Mute Control Output
45	OUTPUT	POWER	Power on/off signal
46	OUTPUT	PDAO	Data output terminal for PLL IC(LC72131)
47	OUTPUT	PCE	Chip enable terminal for PLL IC(LC72131)
48	INPUT	PDAI	Data input terminal for PLL IC(LC72131)
49	INPUT	PCL	Clock input terminal for PLL IC(LC72131)
50	INPUT	Vfip	FIP drive voltage input
51~73	OUTPUT	P01~P23	FIP Anode driver outputs.
74	-		Not used in this unit.
75~87	OUTPUT	G01~G13	FIP Gride driver outputs.
88~90	-		Not used in this unit.
91	OUTPUT	POWER LED	Stand-by LED ON/OFF
92	OUTPUT	ANT A	ANT A LED ON/OFF
93	OUTPUT	ANT B	ANT B LED ON/OFF
94	OUTPUT	NARROW	NARROW LED ON/OFF
95	OUTPUT	WIDE	WIDE LED ON/OFF
96	-		Not used in this unit.
97~100	-	GND	Ground terminal

For area:

	/N1	/U1	/F1
17pin	L	H	L
18pin	L	L	L
19pin	H	L	L
20pin	L	L	L

6. ADJUSTMENT PROCEDURE

ALIGNMENT INSTRUCTIONS

EQUIPMENT NEEDED

* AM Signal Generator
* FM Signal Generator
* Oscilloscope
* VTVM(AC,DC)
* Test loop antenna(MW Adjustnent)
* Dummy antenna(FM Adjustment)
* Stereo signal modulator
* Distortion analyzer

IMPORTANT

1.Check power-source voltage.
2.Set the function switch to band aligned.
3.Keep the function input as low as possible to adjust accurately.
4.Modulation and modulation frequency.

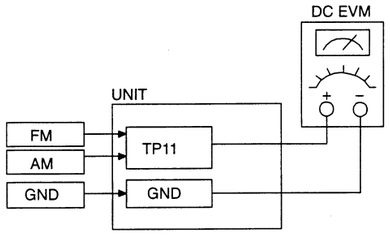
	Modulation	Modulation Frequency
MW(AM)/LW	30%	400Hz
FM	40kHz(EUR) 75kHz(USA,JPN)	400Hz

FM, MW/LW TRACKING VOLTAGE ADJUSTMENT

(FM) DC VOLTMETER
* CONNECT TO TEST POINT TP11 and GND

(MW/LW) DC VOLTMETER
* CONNECT TO TEST POINT TP11 and GND

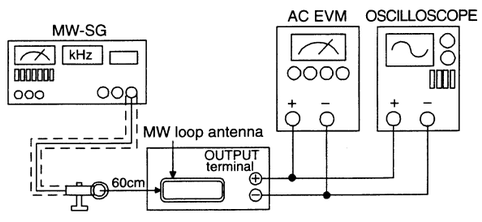
NO	Band	Frequency	Adjust for	Adjustment
1	FM	87.50(76.00)MHz	1.6V	L7
2	MW	522/520kHz	1V	L204
3	LW	146kHz	1.3V	L205



MW RF ADJUSTMENT

Signal generator : Connects to the MW Ant.
Coil through the loop antenna.
Adjust for the indication of VTVM of the wave form of scope to be maximum.

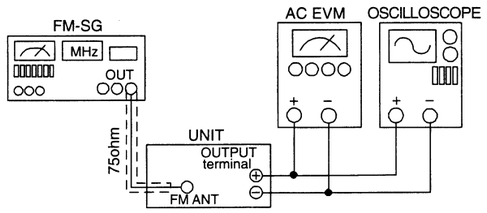
NO	Step	Freq.	Adjust for	Adjustment
MW (AM)	1	612/610kHz	Max sensitivity	L202(L203),T201,T202
	2	1503/1510kHz	Max sensitivity	CT21
	3	Repeat steps 1 and 2 several times.		
LW	1	164kHz	Max sensitivity	L203
	2	272kHz	Max sensitivity	CT22
	3	Repeat steps 1 and 2 several times.		



FM-RF ADJUSTMENT

Signal generator:Connects to FM ANT.JACK(FM IN) through the dummy.

NO	Frequency	Adjust for	Adjustment
1	90.10(79.10)MHz	Max sensitivity	L2,L5,L6
2	Repeat step 1 several times		



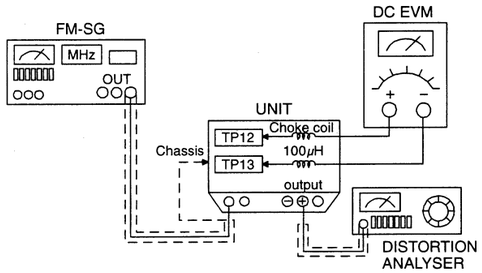
FM MONO DISTORTION ADJUSTMENT

DC VOLTMETER
* Connect to TP12(-),TP13(+) through the chock coil(100uH).

Signal Generator
* Connect to FM ANT Jack(FM IN) through the dummy.

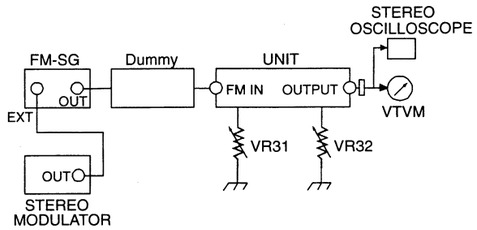
Distortion Meter
* Connect to the output.

NO	Frequency	Adjust for	Adjustment
1	100.10(83.10)MHz	DC Voltmeter 0V	T101
2	100.10(83.10)MHz	min T.H.D	T102
3	Repeat steps 1 and 2 several times		



FM STEREO(WIDE/NARROW) SEPARATION

Pilot Signal	Adjust for	Adjustment
ON	Different of R and L must be maximum	VR31 (WIDE) VR32 (NARROW)



FM/MW(LW) AUTO STOP LEVEL ADJUSTMENT

FM SIGNAL GENERATOR : Connect to FM ANT Jack(FM IN) through the dummy
MW SIGNAL GENERATOR : Connect to MW ANT. Coil thriugh Loop antenna

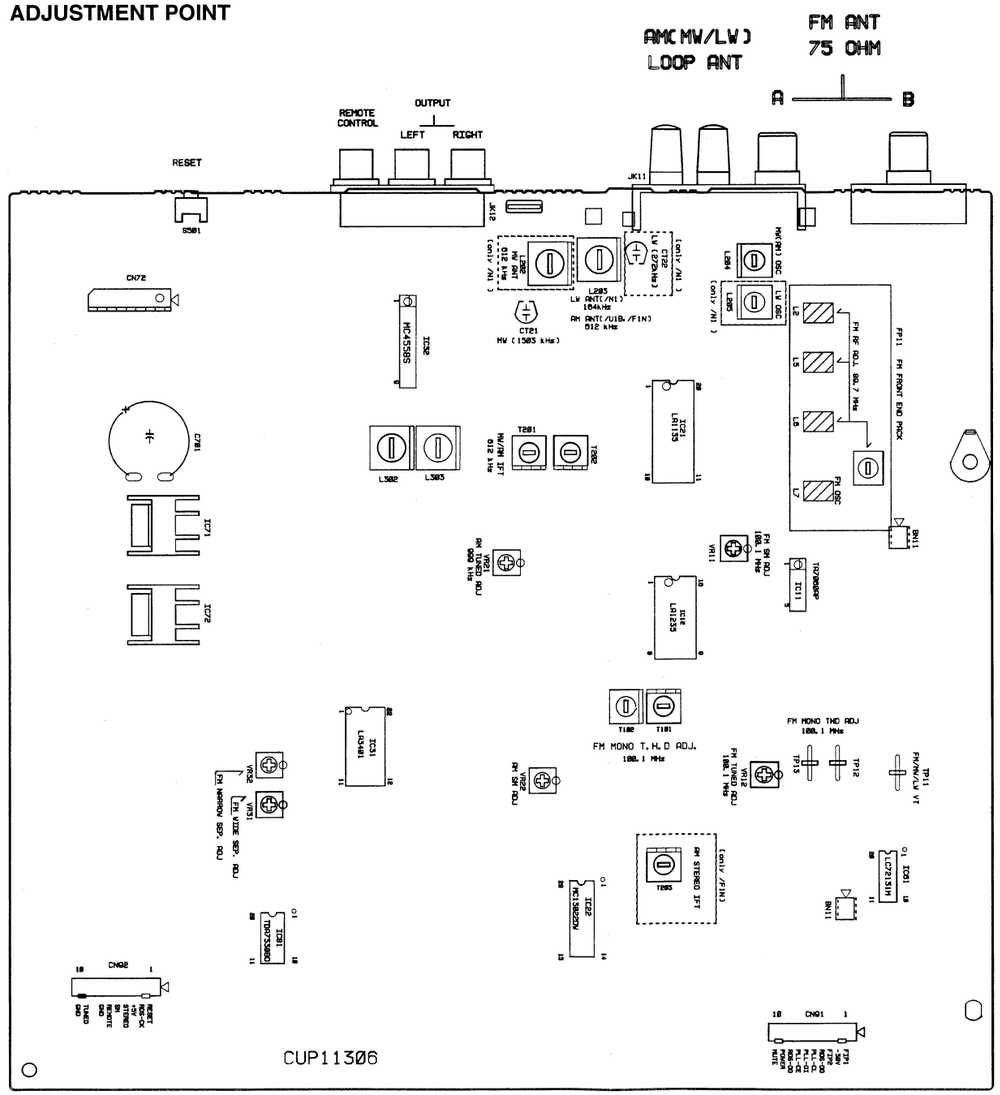
Band	Step	Signal Generator	Adjust for	Adjustment
FM	1	100.10(83.10)MHz 35dB	TUNED ON	VR11
	2	100.10(83.10)MHz 35dB	TUNED OFF	VR11
MW/LW (AM)	1	999(1000)kHz 80dB	TUNED ON	VR21
	2	999(1000)kHz 80dB	TUNED OFF	VR21

FM/MW(AM) SIGNAL METER LEVEL ADJUSTMENT

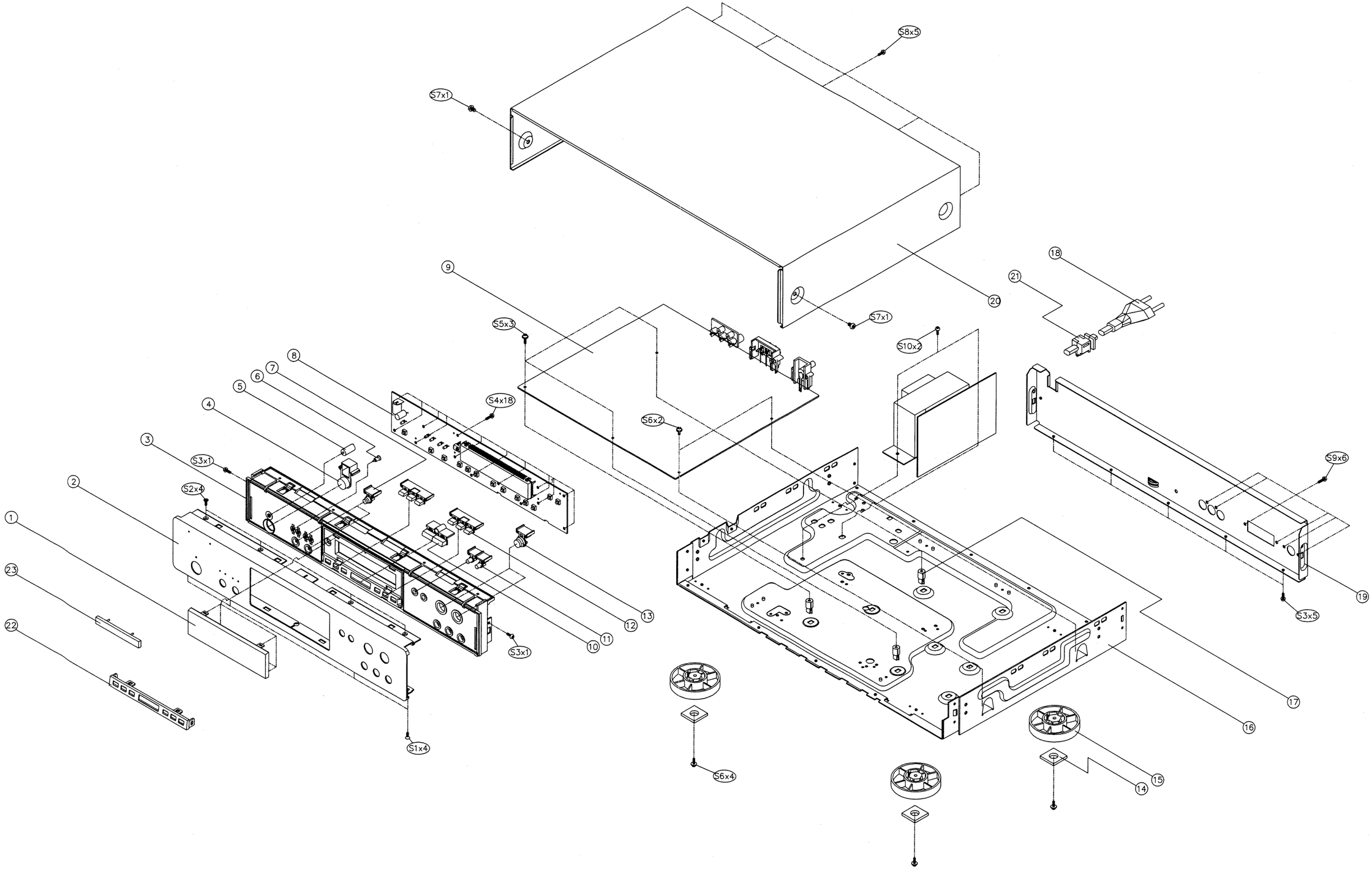
FM SIGNAL GENERATOR : Connect to FM ANT Jack(FM IN) through the dummy
MW SIGNAL GENERATOR : Connect to MW ANT. Coil thriugh Loop antenna

Band	Signal Generator	Adjust for	Adjustment
FM	100.10(83.10)MHz 66dB	Sigmal Level:59~61dB FM(ANT A) IN	VR12
MW (AM)	999(1000)kHz 100dB	Signal Level:75~80dB	VR22

ADJUSTMENT POINT



7. EXPLODED VIEW AND PARTS LIST



POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
1		9965 000 01446	WINDOW FIP	282W158010
2	/U1B	nsp	PANEL FRONT (BLACK)	282W248010
2	/N1B	9965 000 01447	PANEL FRONT (BLACK)	282W248020
2	/F1N	nsp	PANEL FRONT (GOLD)	282W248110
2	/N1G	9965 000 01448	PANEL FRONT (GOLD)	282W248120
3	BLK	9965 000 01449	PANEL SUB (BLACK)	282W105010
3	GLD	9965 000 01450	PANEL SUB (GOLD)	282W105110
4	BLK	9965 000 01243	KNOB POWER (BLACK)	281W270010
4	GLD	9965 000 01451	KNOB POWER (GOLD)	281W270110
5		9965 000 01244	INDICATOR	285W355010
6		9965 000 01452	INDICATOR(LED)	282W355010
7	BLK	9965 000 01453	KNOB BAND (BLACK)	282W270040
7	GLD	9965 000 01454	KNOB BAND (GOLD)	282W270140
10		9965 000 01455	KNOB TUNING	282W270010
11	BLK	9965 000 01456	KNOB TIMER (BLACK)	282W270030
11	GLD	9965 000 01457	KNOB TIMER (GOLD)	282W270130
12		9965 000 01458	KNOB MODE	282W270020
13	BLK	9965 000 01459	KNOB PRESET (BLACK)	282W270050
13	GLD	9965 000 01460	KNOB PRESET (GOLD)	282W270150
15		4822 462 11013	FOOT	243W057010
16		nsp	CHASSIS BOTTOM A1-97-0391	nsp
17		nsp	MOUNT PCB A4-92-1728	nsp
⚠ 18	N	9965 000 01306	MAINS CORD EUR	*YC000360R
⚠ 18	F	nsp	MAINS CORD JPN	*YC000370R
⚠ 18	U	nsp	MAINS CORD UL/CSA	*YC000380R
19	/F1N	nsp	PANEL REAR (GOLD)	nsp
19	/U1B	nsp	PANEL REAR (BLACK)	nsp
19	/N1G	nsp	PANEL REAR (GOLD)	nsp
19	/N1B	nsp	PANEL REAR (BLACK)	nsp
20	BLK	nsp	CABINET TOP (BLACK)	nsp
20	GLD	nsp	CABINET TOP (GOLD)	nsp
⚠ 21		nsp	BUSHING MAINS CORD	nsp
22		9965 000 01461	ORNAMENT	282W053010
23		4822 454 11825	BADGE MARANTZ	185J251012
			PACKING	
S1		nsp	SCREW	nsp
S2		nsp	SCREW	nsp
S3		nsp	SCREW	nsp
S4		nsp	SCREW	nsp
001T	F	nsp	USER GUIDE (JPN)	282W851110
001T	U	nsp	USER GUIDE (USA/CND)	282W851250
001T	N	9965 000 01462	USER GUIDE (EUR)	282W851310
001Z	U/F	nsp	REMOTE CONTOL UNIT RC6000ST	ZK282W0010
			NOT STANDARD SPARE PARTS	
		nsp	BOX OUT CARTON	282W801010
		nsp	PAD SNOW	282W809010
	U/N	nsp	BATTERY	nsp
		nsp	CORD PIN (REMOTE)	nsp
		nsp	CORD PIN (STEREO)	nsp
	U/F	nsp	ADAPTOR 300 OHM MATCHING	nsp
	N	nsp	ANT FM WIRE	nsp
	U/F	nsp	ANT FM T	nsp
		nsp	LOOP ANT ASS'Y (LUG)	nsp

8.ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R＊＊＊ : 1) GD05 x x x 140, Carbon film fixed resistor,±5% 1/4W
R＊＊＊ : 2) GD05 x x x 160, Carbon film fixed resistor,±5% 1/6W
→ ① Resistance value

Examples
① Resistance value

0.1Ω	001	10Ω	100	1kΩ	102	100kΩ	104
0.5Ω	005	18Ω	180	2.7kΩ	272	680kΩ	684
1Ω	010	100Ω	101	10kΩ	103	1MΩ	105
6.8Ω	068	390Ω	391	22kΩ	223	4.7MΩ	475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C＊＊＊ : CERAMIC CAP.
3) DD1 x x x x 370, Ceramic capacitor
Disc type
Temp.coeff. P350~N1000, 50V
③ Capacity value
② Tolerance

Examples
② Tolerance (Capacity deviation)
±0.25 pF 0
±0.5 pF 1
±5 % 5
Tolerance of COMMON PARTS handled here are as follows :
0.5 pF - 5 pF ..... ± 0.25 pF
6 pF - 10 pF ..... ± 0.5 pF
12 pF - 560 pF ... ± 5 %

③ Capacity value

0.5 pF	005	3 pF	030	100 pF	101
1 pF	010	10 pF	100	220 pF	221
1.5 pF	015	47 pF	470	560 pF	561

C＊＊＊ : CERAMIC CAP.
4) DK16 x x x 300, High dielectric constant ceramic capacitor
Disc type
Temp.chara. 2B4, 50V
④ Capacity value

Examples
④ Capacity value

100 pF	101	1000 pF	102	10000 pF	103
470 pF	471	2200 pF	222		

C＊＊＊ : 5) ELECTROLY CAP.(⫫), 6)FILM CAP (=)
5) EA x x x x x x 10, Electrolytic capacitor
One-way lead type,Tolerance ±20%
⑥ Working voltage
⑤ Capacity value

Examples
⑤ Capacity value

0.1μF	104	4.7μF	475	100μF	107
0.33μF	334	10μF	106	330μF	337
1μF	105	22μF	226	1100μF	118
2200μF	228				

⑥ Working voltage

6.3 V	006	25 V	025
10 V	010	35 V	035
16 V	016	50 V	050

6) DF15 x x x 350 → Plastic film capacitor
DF15 x x x 310 → One-way type, Mylar ±5% 50V
DF16 x x x 310 → Plastic film capacitor
One-way type, Mylar ±10% 50V
⑦ Capacity value

Examples
⑦ Capacity value

0.001μF (1000 pF)	102	0.1μF	104
0.0018μF	182	0.56μF	564
0.01μF	103	1μF	105
0.015μF	153		

NOTE 1) The above CODES(R＊＊＊ ,R＊＊＊ ,C＊＊＊ ,C＊＊＊ and C＊＊＊) are omitted on the schematic diagram in some case.
2) On the occasion, be confirmed the common parts on the parts list.
3) Refer to "Common Parts List" for the other common parts(**RI05, DD4, DK4**).

NOTE ON SAFETY FOR FUSIBLE RESIST OR :

The suppliers and their type numbers of fusible resistors are as follows ;
1 . KOA Corporation

Part No.(MJI)	Type No.(KOA)	Description
NH05 x x x 140	RF25S x x x x Ω	J ±5% (1/4W)
NH05 x x x 120	RF50S x x x x Ω	J ±5% (1/2W)
NH85 x x x 110	RF73B2A x x x x Ω	J ±5% (1/10W)
NH95 x x x 140	RF73B2E x x x x Ω	J ±5% (1/4W)

＊ Resistance value　　Resistance value(0.1Ω - 10k Ω)

2. Matsushita Electronic Components Co., Ltd

Part No.(MJI)	Type No.(MEC)	Description
NF05 x x x 140	ERD-2FCJ x x x	(±5% 1/4W)
RF05 x x x 140		
NF02 x x x 140	ERD-2FCG x x x	(±2% 1/4W)
RF02 x x x 140		

＊Resistance value

Examples
＊ Resistance value

0.1Ω	001	10Ω	100	1kΩ	102	100kΩ	104
0.5Ω	005	18Ω	180	2.7kΩ	272	680kΩ	684
1Ω	010	100Ω	101	10kΩ	103	1MΩ	105
6.8Ω	068	390Ω	391	22kΩ	223	4.7MΩ	475

ABBREVIATION AND MARKS

ANT.	: ANTENNA	BATT.	: BATTERY
CAP.	: CAPACITOR	CER.	: CERAMIC
CONN.	: CONNECTING	DIG.	: DIGITAL
HP	: HEADPHONE	MIC.	: MICROPHONE
μ-PRO	: MICROPROCESSOR	REC.	: RECORDING
RES.	: RESISTOR	SPK	: SPEAKER
SW	: SWITCH	TRANSF.	: TRANSFORMER
TRIM.	: TRIMMING	TRS.	: TRANSISTOR
VAR.	: VARIABLE	X'TAL	: CRYSTAL

NOTE ON SAFETY:

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠ Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意 :

⚠ がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
			SUB CIRCUIT BOARD	
			CAPACITORS	
C901		nsp	CER. 0.1 µF 50V Z	nsp
C902		nsp	ELECT 1000 µF 6.3V	nsp
C903		nsp	CER. 0.1 µF 50V Z	nsp
C911		nsp	CER. 22pF 50V J	nsp
C912		nsp	CER. 15pF 50V J	nsp
C913		nsp	CER. 12pF 50V J	nsp
C914		nsp	CER. 10pF 50V J	nsp
C923		nsp	ELECT 10 µF 35V	nsp
C924		nsp	ELECT 1 µF 50V	nsp
C925		nsp	CER. 0.1 µF 50V Z	nsp
C926		nsp	ELECT 22 µF 25V	nsp
C927		nsp	ELECT 1 µF 50V	nsp
C929		nsp	CER. 0.01 µF 50V Z	nsp
			DIODES	
D901		4822 130 11608	LED RED SLR342VCF02	*HI100810R
D902		4822 130 11608	LED RED SLR342VCF02	*HI100810R
D903		4822 130 11608	LED RED SLR342VCF02	*HI100810R
D905		4822 130 11608	LED RED SLR342VCF02	*HI100810R
D906		4822 130 11608	LED RED SLR342VCF02	*HI100810R
D910				
⟆		9965 000 01250	1SS131M	*HD201290R
D914				
			INTEGRATED CIRCUIT	
IC91		9965 000 01463	MICROPROCESSOR	*HU100350R
			TMP87CM78F-xxxx	
IC92		9965 000 01464	VOLTAGE DETECTOR	*HC105150R
			RE5VL30CA-TZ	
			TRANSISTORS	
Q901		4822 130 62503	DTC114YS	*BA000730R
Q902		4822 130 62503	DTC114YS	*BA000730R
Q903		4822 130 62503	DTC114YS	*BA000730R
Q905		4822 130 62503	DTC114YS	*BA000730R
Q906		4822 130 62503	DTC114YS	*BA000730R
Q911		4822 130 62787	DTA114YS	*BA000190R
Q912		4822 130 62503	DTC114YS	*BA000730R
Q913		4822 130 60107	2SA933SR	HT109331S0
Q914		4822 130 62503	DTC114YS	*BA000730R
			RESISTORS	
RA91		nsp	100 kΩ x 5 NETWORK	nsp
⚠ R751	U	nsp	3.3M Ω 1/2W	nsp
R901		nsp	390 Ω 1/5W	nsp
R902		nsp	390 Ω 1/5W	nsp
R903		nsp	390 Ω 1/5W	nsp
R905		nsp	390 Ω 1/5W	nsp
R906		nsp	390 Ω 1/5W	nsp
R908				
⟆		nsp	47k Ω 1/5W	nsp
R912				
R920				
⟆		nsp	47k Ω 1/5W	nsp
R923				
R931		nsp	1M Ω 1/5W	nsp
R951		nsp	1.2k Ω 1/5W	nsp
R952		nsp	100k Ω 1/5W	nsp
R953		nsp	390k Ω 1/5W	nsp
R954		nsp	1.2k Ω 1/5W	nsp
R955		nsp	100k Ω 1/5W	nsp
R956		nsp	1.2k Ω 1/5W	nsp
R957		nsp	4.7k Ω 1/5W	nsp
R958		nsp	22k Ω 1/5W	nsp
R959		nsp	470 Ω 1/5W	nsp
R960		nsp	47k Ω 1/5W	nsp
R961		nsp	47k Ω 1/5W	nsp

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
R962		nsp	1k Ω 1/5W	nsp
R963		nsp	47k Ω 1/5W	nsp
			SWITCHES	
S911				
⟆		9965 000 01263	SW TACT	*SP000890R
S926				
S927	N	9965 000 01263	SW TACT	*SP000890R
S928		9965 000 01263	SW TACT	*SP000890R
			MISCELLANEOUS	
BN72		nsp	WIRE ASS'Y 7P 220 mm	nsp
BN91		nsp	WIRE ASS'Y 10P 200 mm	nsp
BN92		nsp	WIRE ASS'Y 10P 250 mm	nsp
BN93		nsp	WIRE ASS'Y 7P 80 mm	nsp
⚠ CN71		nsp	WAFER 7.92MM(YUNHO)	nsp
CN93		nsp	WAFER MOLEX 53014-0710	nsp
FIP1		9965 000 01465	FLD HNA-13MS08	*HQ300390R
⚠ F701	N	nsp	HOLDER FUSE	nsp
⚠ F702	U/F	nsp	HOLDER FUSE	nsp
OP01		nsp	WIRE COPPER	nsp
OP02		nsp	WIRE COPPER	nsp
OP03	F	nsp	WIRE COPPER	nsp
OP04	U/F	nsp	WIRE COPPER	nsp
C930		9965 000 01510	BACK UP CAPACITOR 0.1F 5.5V EECSOHD104V	*EX000050R
RS91	U/F	nsp	IR SENSOR GP1U270R	*HW100420R
⚠ T701	F	nsp	TRANS MAINS (JAPAN) 100V 50Hz	*TS001110R
⚠ T701	N/U	9965 000 01466	TRANS MAINS 120/230V 50/60Hz	*TS001120R
X901		4822 242 10855	CRYSTAL 8.0 MHz	*JX000410R
X902		4822 242 72236	CRYSTAL 32.768 kHz DT-38	XO001001T2
			MAIN CIRCUIT BOARD	
			CAPACITORS	
C101	N	nsp	CER. 15pF 50VJ	nsp
C102	N	nsp	CER. 15pF 50VJ	nsp
C103	N	nsp	CER. 15pF 50VJ	nsp
C104		nsp	ELECT 10 µF 35V	nsp
C107		nsp	CER. 0.01 µF 50V Z	nsp
C108		nsp	CER. 15pF 50V J	nsp
C109		nsp	CER. 0.01 µF 50V Z	nsp
C110		nsp	CER. 0.01 µF 50V Z	nsp
C111		nsp	ELECT 10 µF 35V	nsp
C112		nsp	CER. 0.01 µF 50V Z	nsp
C113		nsp	CER. 0.01 µF 50V Z	nsp
C114		nsp	CER. 0.01 µF 50V Z	nsp
C115		nsp	ELECT 10 µF 35V	nsp
C117		nsp	CER. 47pF 50V J	nsp
C118		nsp	CER. 15pF 50V J	nsp
C120		nsp	CER. 0.047 µF 50V Z	nsp
C121		nsp	CER. 0.047 µF 50V Z	nsp
C122		nsp	CER. 0.047 µF 50V Z	nsp
C123		nsp	ELECT 2.2 µF 50V	nsp
C124		nsp	CER. 0.01 µF 50V Z	nsp
C125		nsp	ELECT 1 µF 50V	nsp
C126		nsp	ELECT 0.47 µF 50V	nsp
C127		nsp	CER. 0.022 µF 50V Z	nsp
C128		nsp	ELECT 220 µF 16V	nsp
C131	N	nsp	CER. 0.01 µF 50V Z	nsp
C132		nsp	CER. 220pF 50V K	nsp
C133	N	nsp	CER. 100pF 50V K	nsp

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
C134	N	nsp	CER. 100pF 50V K	nsp
C135		nsp	CER. 0.01μF 50V Z	nsp
C136		nsp	ELECT 220μF 16V	nsp
C151		nsp	CER. 0.01μF 50V Z	nsp
C152		nsp	CER. 0.01μF 50V Z	nsp
C153		nsp	CER. 0.01μF 50V Z	nsp
C154		nsp	CER. 0.01μF 50V Z	nsp
C161		nsp	CER. 0.01μF 50V Z	nsp
C162		nsp	ELECT 10μF 35V	nsp
C163		nsp	CER. 0.01μF 50V Z	nsp
C171	N	nsp	CER. 10pF 50V D	nsp
C171	U/F	nsp	CER. 0.01μF 50V Z	nsp
C201		nsp	SEMI 0.1μF 50V	nsp
C202	N	nsp	CER. 15pF 50V J	nsp
C203		nsp	FILM 0.047μF 50V J	nsp
C204		nsp	ELECT 22μF 25V	nsp
C205		nsp	CER. 0.022μF 50V Z	nsp
C206		nsp	ELECT 3.3μF 50V	nsp
C207		nsp	CER. 0.022μF 50V Z	nsp
C208		nsp	CER. 1000pF 50V K	nsp
C209		nsp	SEMI 0.1μF 50V	nsp
C212		nsp	CER. 1000 pF 50V K	nsp
C213		nsp	CER. 1000pF 50V K	nsp
C214		nsp	CER. 0.022μF 50V Z	nsp
C215		nsp	ELECT 4.7μF 50V	nsp
C216		nsp	ELECT 3.3μF 50V	nsp
C217		nsp	CER. 1000pF 50V K	nsp
C218		nsp	CER. 10pF 50V D	nsp
C219		nsp	CER. 470pF 50V K	nsp
C220	N	nsp	CER. 100pF 50V K	nsp
C221		nsp	CER. 0.022μF 50V Z	nsp
C222		nsp	ELECT 220μF 16V	nsp
C223	N	nsp	CER. 330pF 50V K	nsp
C224		nsp	CER. 0.047μF 50V Z	nsp
C225	N	nsp	CER. 0.047μF 50V Z	nsp
C226		nsp	ELECT 1μF 50V	nsp
C227		nsp	CER. 0.022μF 50V Z	nsp
C228		nsp	ELECT 1μF 50V	nsp
C230	F	nsp	CER. 1000pF 50V K	nsp
C231	F	nsp	ELECT 100μF 16V	nsp
C232	F	nsp	CER. 0.022μF 50V Z	nsp
C233				
⟆	F	nsp	CER. 1000pF 50V K	nsp
C236				
C237	F	nsp	CER. 0.01μF 50V Z	nsp
C238	F	nsp	ELECT 10μF 35V	nsp
C239	F	nsp	ELECT 10μF 35V	nsp
C240	F	nsp	ELECT 0.47μF 50V	nsp
C241	F	nsp	ELECT 10μF 35V	nsp
C242	F	nsp	ELECT 1μF 50V	nsp
C243	F	nsp	SEMI 0.1μF 50V	nsp
C245	F	nsp	CER. 56pF 50V J	nsp
C246	F	nsp	CER. 0.01μF 50V Z	nsp
C247	F	nsp	ELECT 1μF 50V	nsp
C248	F	nsp	ELECT 47μF 25V	nsp
C251	F	nsp	ELECT 0.22μF 50V	nsp
C252	F	nsp	ELECT 0.22μF 50V	nsp
C253	F	nsp	ELECT 2.2μF 50V	nsp
C254	F	nsp	ELECT 2.2μF 50V	nsp
C255	F	nsp	FILM 0.047μF 50V J	nsp
C256	F	nsp	FILM 0.047μF 50V J	nsp
C257	F	nsp	ELECT 2.2μF 50V	nsp
C258	F	nsp	ELECT 2.2μF 50V	nsp
C261	F	nsp	ELECT 3.3μF 50V	nsp
C301		nsp	ELECT 220μF 16V	nsp
C302	N	nsp	FILM 0.015μF 50V J	nsp
C302	U	nsp	FILM 0.033μF 50V J	nsp
C303		9965 000 01469	ELECT 2.2μF 50V(N.P)	EQ22505030

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
C304		nsp	FILM 0.047μF 50V J	nsp
C305		nsp	CER. 470pF 50V K	nsp
C306		nsp	ELECT 10μF 35V	nsp
C307		nsp	ELECT 0.1μF 50V	nsp
C308	N/F	nsp	CER. 560pF 50V K	nsp
C308	U	nsp	CER. 820pF 50V K	nsp
C309	N/F	nsp	CER. 560pF 50V K	nsp
C309	U	nsp	CER. 820pF 50V K	nsp
C310		nsp	ELECT 0.1μF 50V	nsp
C311		nsp	ELECT 1μF 50V	nsp
C312		nsp	ELECT 0.47μF 50V	nsp
C313		nsp	ELECT 3.3μF 50V	nsp
C314		nsp	ELECT 1μF 50V	nsp
C316	F	nsp	ELECT 2.2μF 50V	nsp
C317	F	nsp	ELECT 2.2μF 50V	nsp
C318		nsp	ELECT 2.2μF 50V	nsp
C319		nsp	ELECT 2.2μF 50V	nsp
C320		nsp	ELECT 1μF 50V	nsp
C321		nsp	ELECT 1μF 50V	nsp
C322				
⟆		nsp	ELECT 10μF 35V	nsp
C325				
C340		nsp	ELECT 100μF 16V	nsp
C341		nsp	ELECT 10μF 35V	nsp
C342		nsp	ELECT 1μF 50V	nsp
C343		nsp	CER. 330pF 50V K	nsp
C347	F	nsp	ELECT 100μF 16V	nsp
C351		9965 000 01469	ELECT 2.2μF 50V(N.P)	EQ22505030
C601		nsp	ELECT 470μF 10V	nsp
C602		nsp	CER. 0.01μF 50V Z	nsp
C603		nsp	CER. 27pF 50V J	nsp
C604		nsp	CER. 27pF 50V J	nsp
C605		nsp	CER. 0.01μF 50V Z	nsp
C611		nsp	ELECT 1μF 50V	nsp
C612		nsp	ELECT 0.1μF 50V	nsp
C621				
⟆		nsp	CER. 100pF 50V K	nsp
C624		nsp		
⚠ C701		nsp	ELECT 3300μF 35V	nsp
C702				
⟆		nsp	ELECT 220μF 35V	nsp
C705				
C706		nsp	CER. 680pF 50V K	nsp
C707		nsp	CER. 680pF 50V K	nsp
C708		nsp	CER. 680pF 50V K	nsp
C709		nsp	ELECT 47μF 50V	nsp
C710		nsp	CER. 680pF 50V K	nsp
C711		nsp	CER. 680pF 50V K	nsp
C712		nsp	ELECT 47μF 50V	nsp
C713		nsp	ELECT 47μF 50V	nsp
C714		nsp	ELECT 3.3μF 50V	nsp
C715		nsp	CER. 680pF 50V K	nsp
C720		nsp	CER. 0.022μF 50V Z	nsp
C801	N	nsp	ELECT 220μF 16V	nsp
C802	N	nsp	CER. 0.01μF 50V Z	nsp
C805	N	nsp	ELECT 10μF 35V	nsp
C806	N	nsp	CER. 0.01μF 50V Z	nsp
C808	N	nsp	CER. 27pF 50V J	nsp
C809	N	nsp	CER. 27pF 50V J	nsp
C810	N	nsp	CER. 100pF 50V K	nsp
C811	N	nsp	CER. 100pF 50V K	nsp
			FILTERS	
CF11		9965 000 01467	FILTER CER.(FM) SFE107MX2H-A-T	*FF100260R
CF12		9965 000 01468	FILTER CER.(FM) SFE107MZ2H-A-T	*FF100270R
CF13		9965 000 01468	FILTER CER.(FM) SFE107MZ2H-A-T	*FF100270R

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
CF14		9965 000 01468	FILTER CER.(FM) SFE107MZ2H-A-T	*FF100270R
			DIODES	
D101		9965 000 01250	1SS131M	*HD201290R
D102		9965 000 01250	1SS131M	*HD201290R
D103		4822 130 30621	1N4148	QP13030621
D111		9965 000 01250	1SS131M	*HD201290R
D112		9965 000 01250	1SS131M	*HD201290R
D113		9965 000 01250	1SS131M	*HD201290R
D201		4822 130 82772	SVC321SPA-C-2	*HD400150R
D202	N	9965 000 01250	1SS131M	*HD201290R
D203	N	9965 000 01250	1SS131M	*HD201290R
D205		4822 130 30621	1N4148	QP13030621
D206		4822 130 30621	1N4148	QP13030621
D301		4822 130 30621	1N4148	QP13030621
D302		9965 000 01250	1SS131M	*HD201290R
D501		9965 000 01250	1SS131M	*HD201290R
D601		9965 000 01250	1SS131M	*HD201290R
D602		9965 000 01250	1SS131M	*HD201290R
D603		4822 130 30621	1N4148	QP13030621
⚠ D701				
⚠ D705		4822 130 31878	1N4003	HD200010AR
⚠ D710		4822 130 31878	1N4003	HD200010AR
⚠ D711		4822 130 31878	1N4003	HD200010AR
⚠ D712		9965 000 01470	ZENER 30V 1/2W	*HD301440R
⚠ D713		9965 000 01471	ZENER 6.8V 1/2W	*HD301720R
D801	N	4822 130 30621	1N4148	QP13030621
D802		9965 000 01250	1SS131M	*HD201290R
D803		9965 000 01250	1SS131M	*HD201290R
			INTEGRATED CIRCUITS	
IC11		9965 000 01476	IC TA7060AP	*HC105160R
IC12		4822 209 73726	IC LA1235	*HC105130R
IC21		4822 209 63917	IC LA1135	*HC105120R
IC22	F	nsp	IC MC13022DW	*HC105140R
IC31		4822 209 73434	IC LA3401	*HC105050R
IC32		9965 000 01402	IC MC4558S	*HC104120R
IC33	F	5322 209 10357	IC HEF4066BP	QQ20910357
IC61		4822 209 15778	IC LC72131M	*HC104820R
⚠ IC71		4822 209 91033	IC KA7815-ABTU	*HC300220R
⚠ IC72		4822 209 90086	IC KA7805-ABTU	*HC300210R
IC81	N	4822 209 33842	IC TDA7330B	*HC105170R
			TRANSISTORS	
Q101		4822 130 62503	DTC114YS	*BA000730R
Q102		4822 130 61187	DTA144TS	BA10009210
Q103		4822 130 61187	DTA144TS	BA10009210
Q104				
Q107		4822 130 63385	KTC3192O	*HT300480R
Q111		4822 130 62787	DTA114YS	*BA000190R
Q112		4822 130 62787	DTA114YS	*BA000190R
Q113		4822 130 62503	DTC114YS	*BA000730R
Q201		9965 000 01472	FET 2SK715	*HF200250R
Q202		4822 130 63485	KTC3198Y	*HT300690R
Q203	N	4822 130 62503	DTC114YS	*BA000730R
Q204	N	4822 130 61189	DTC114TS	BA20017210
Q205	N	4822 130 61189	DTC114TS	BA20017210
Q206	N	4822 130 62503	DTC114YS	*BA000730R
Q207	N	4822 130 61189	DTC114TS	BA20017210
Q208	N	4822 130 61189	DTC114TS	BA20017210
Q209		4822 130 61189	DTC114TS	BA20017210
Q210		4822 130 61188	DTC144TS	BA20016210
Q211	F	4822 130 42594	DTC144ES	BA20012210
Q212	F	4822 130 63485	KTC3198Y	*HT300690R
Q213	F	4822 130 63485	KTC3198Y	*HT300690R
Q301		4822 130 62503	DTC114YS	*BA000730R

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
Q302		4822 130 63659	DTC143TS	*BA000700R
Q303		4822 130 63659	DTC143TS	*BA000700R
Q304		4822 130 61187	DTA144TS	BA10009210
Q306		4822 130 42594	DTC144ES	BA20012210
Q308		4822 130 63659	DTC143TS	*BA000700R
Q309		4822 130 63659	DTC143TS	*BA000700R
Q501		4822 130 62787	DTA114YS	*BA000190R
Q502		4822 130 61188	DTC144TS	BA20016210
Q601		4822 130 62787	DTA114YS	*BA000190R
Q602		4822 130 62787	DTA114YS	*BA000190R
⚠ Q701		4822 130 11136	KTA1274Y	*HT100320R
Q702		4822 130 61188	DTC144TS	BA20016210
			RESISTORS	
R101		nsp	47Ω 1/5W	nsp
R104	N/U	nsp	5.6kΩ 1/5W	nsp
R105	N/U	nsp	6.8kΩ 1/5W	nsp
R106		nsp	150Ω 1/5W	nsp
R108		nsp	6.8kΩ 1/5W	nsp
R109		nsp	10kΩ 1/5W	nsp
R110		nsp	330Ω 1/5W	nsp
R111		nsp	1kΩ 1/5W	nsp
R112		nsp	820Ω 1/5W	nsp
R113		nsp	220Ω 1/5W	nsp
R114		nsp	27kΩ 1/5W	nsp
R115		nsp	18kΩ 1/5W	nsp
R116		nsp	6.8kΩ 1/5W	nsp
R117		nsp	3.3kΩ 1/5W	nsp
R118		nsp	330Ω 1/5W	nsp
R119		nsp	330Ω 1/5W	nsp
R120		nsp	1kΩ 1/5W	nsp
R122		nsp	1kΩ 1/5W	nsp
R123		nsp	2.7kΩ 1/5W	nsp
R125		nsp	150Ω 1/5W	nsp
R126		nsp	5.6kΩ 1/5W	nsp
R127		nsp	330Ω 1/5W	nsp
R130		nsp	10kΩ 1/5W	nsp
R131		nsp	22kΩ 1/5W	nsp
R132		nsp	2.7kΩ 1/5W	nsp
R133		nsp	2.7kΩ 1/5W	nsp
R134		nsp	22kΩ 1/5W	nsp
R151		nsp	6.8kΩ 1/5W	nsp
R152		nsp	6.8kΩ 1/5W	nsp
R153		nsp	3.3kΩ 1/5W	nsp
R155		nsp	150kΩ 1/5W	nsp
R156		nsp	10kΩ 1/5W	nsp
R158		nsp	5.6kΩ 1/5W	nsp
R160		nsp	1kΩ 1/5W	nsp
R161		nsp	1kΩ 1/5W	nsp
R162		nsp	680Ω 1/5W	nsp
R163		nsp	220Ω 1/5W	nsp
R164		nsp	27kΩ 1/5W	nsp
R165		nsp	18kΩ 1/5W	nsp
R201		nsp	1MΩ 1/5W	nsp
R202		nsp	1kΩ 1/5W	nsp
R203		nsp	100kΩ 1/5W	nsp
R204		nsp	68Ω 1/5W	nsp
R205		nsp	68Ω 1/5W	nsp
R206		nsp	330Ω 1/5W	nsp
R207		nsp	68Ω 1/5W	nsp
R208		nsp	10kΩ 1/5W	nsp
R209		nsp	10kΩ 1/5W	nsp
R210		nsp	1kΩ 1/5W	nsp
R211	N	nsp	1kΩ 1/5W	nsp
R212	N	nsp	2.2kΩ 1/5W	nsp
R213		nsp	150Ω 1/5W	nsp
R214	N	nsp	2.2kΩ 1/5W	nsp

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
R215	N	nsp	4.7kΩ 1/5W	nsp
R216	N	nsp	10kΩ 1/5W	nsp
R217	U	nsp	39kΩ 1/5W	nsp
R217	N	nsp	91kΩ 1/5W	nsp
R218		nsp	5.6kΩ 1/5W	nsp
R220		nsp	2.2kΩ 1/5W	nsp
R221		nsp	22kΩ 1/5W	nsp
R222		nsp	47kΩ 1/5W	nsp
R223		nsp	27kΩ 1/5W	nsp
R230	F	nsp	10kΩ 1/5W	nsp
R231	F	nsp	150Ω 1/5W	nsp
R232	F	nsp	12kΩ 1/5W	nsp
R233	F	nsp	100kΩ 1/5W	nsp
R235	F	nsp	2.2kΩ 1/5W	nsp
R236	F	nsp	2.2kΩ 1/5W	nsp
R237	F	nsp	10kΩ 1/5W	nsp
R251	F	nsp	10kΩ 1/5W	nsp
R252	F	nsp	10kΩ 1/5W	nsp
R253	F	nsp	150kΩ 1/5W	nsp
R254	F	nsp	150kΩ 1/5W	nsp
R255	F	nsp	10kΩ 1/5W	nsp
R256	F	nsp	10kΩ 1/5W	nsp
R257	F	nsp	3.9kΩ 1/5W	nsp
R258	F	nsp	3.9kΩ 1/5W	nsp
R259	F	nsp	680Ω 1/5W	nsp
R260	F	nsp	680Ω 1/5W	nsp
R261	F	nsp	47Ω 1/5W	nsp
R301		nsp	150Ω 1/5W	nsp
R302		nsp	3.9kΩ 1/5W	nsp
R303		nsp	3.3kΩ 1/5W	nsp
R304		nsp	3.3kΩ 1/5W	nsp
R306		nsp	91kΩ 1/5W	nsp
R307		nsp	91kΩ 1/5W	nsp
R308		nsp	10kΩ 1/5W	nsp
R309		nsp	10kΩ 1/5W	nsp
R310		nsp	150kΩ 1/5W	nsp
R311		nsp	150kΩ 1/5W	nsp
R312		nsp	3.3kΩ 1/5W	nsp
R313		nsp	3.3kΩ 1/5W	nsp
R315		nsp	1kΩ 1/5W	nsp
R316		nsp	47kΩ 1/5W	nsp
R317		nsp	47kΩ 1/5W	nsp
R318		nsp	47kΩ 1/5W	nsp
R319		nsp	100kΩ 1/5W	nsp
R320		nsp	100kΩ 1/5W	nsp
R321		nsp	150Ω 1/5W	nsp
R322		nsp	3.3kΩ 1/5W	nsp
R323		nsp	3.3kΩ 1/5W	nsp
R324		nsp	100kΩ 1/5W	nsp
R325		nsp	100kΩ 1/5W	nsp
R326	U/F	nsp	2.7kΩ 1/5W	nsp
R326	N	nsp	5.6kΩ 1/5W	nsp
R327	U/F	nsp	2.7kΩ 1/5W	nsp
R327	N	nsp	5.6kΩ 1/5W	nsp
R328		nsp	100Ω 1/5W	nsp
R329		nsp	100Ω 1/5W	nsp
R330		nsp	1kΩ 1/5W	nsp
R331		nsp	1kΩ 1/5W	nsp
R332		nsp	100kΩ 1/5W	nsp
R333		nsp	100kΩ 1/5W	nsp
R334		nsp	100Ω 1/5W	nsp
R335		nsp	100Ω 1/5W	nsp
R340		nsp	330Ω 1/5W	nsp
R341		nsp	10kΩ 1/5W	nsp
R342		nsp	10kΩ 1/5W	nsp
R343		nsp	1kΩ 1/5W	nsp
R344		nsp	100kΩ 1/5W	nsp

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
R345		nsp	2.2kΩ 1/5W	nsp
R346		nsp	100Ω 1/5W	nsp
R351		nsp	47kΩ 1/5W	nsp
R352		nsp	47kΩ 1/5W	nsp
R501		nsp	100kΩ 1/5W	nsp
R502		nsp	10kΩ 1/5W	nsp
R511		nsp	10kΩ 1/5W	nsp
R601				
∫		nsp	10kΩ 1/5W	nsp
R604				
R605		nsp	1kΩ 1/5W	nsp
R611		nsp	1kΩ 1/5W	nsp
R612		nsp	2.2kΩ 1/5W	nsp
R613		nsp	18kΩ 1/5W	nsp
R615		nsp	10kΩ 1/5W	nsp
R616		nsp	10kΩ 1/5W	nsp
R617		nsp	4.7kΩ 1/5W	nsp
R618		nsp	150Ω 1/5W	nsp
⚠ R701		4822 053 10109	10Ω 1W J METAL	GA05100010
⚠ R702		4822 053 10479	47Ω 1W J METAL	GA05470010
R703		nsp	18kΩ 1/5W	nsp
R704		nsp	4.7kΩ 1/5W	nsp
R711		nsp	47kΩ 1/5W	nsp
R712		nsp	330Ω 1/5W	nsp
R713		nsp	10Ω 1/5W	nsp
R714		nsp	47kΩ 1/5W	nsp
R715		nsp	4.7Ω 1/5W	nsp
R716		nsp	4.7Ω 1/5W	nsp
R801	N	nsp	150Ω 1/5W	nsp
R802	N	nsp	1MΩ 1/5W	nsp
VR11		9965 000 01270	TRIM. EVNDJAA03B15	*RA000930R
VR12		9965 000 01473	TRIM. EVNDJAA03B14	*RA000880R
VR21		9965 000 01473	TRIM. EVNDJAA03B14	*RA000880R
VR22		9965 000 01270	TRIM. EVNDJAA03B15	*RA000930R
VR31		9965 000 01270	TRIM. EVNDJAA03B15	*RA000930R
VR32		9965 000 01270	TRIM. EVNDJAA03B15	*RA000930R
			FUSES	
⚠ F701	N	4822 070 12001	T 200 mA 250V	*FS000590R
⚠ F702	F	4822 070 12001	T 200 mA 250V	*FS000590R
⚠ F702	U	nsp	T 200 mA 250V	*FS000600R
			COILS	
L101	N	nsp	COIL	nsp
L133	N	4822 157 11873	COIL 18 mH	*LC107220R
L202	N	9965 000 01480	COIL MW ANT	*LA000130R
L203	N	9965 000 01481	COIL LW ANT	*LA000120R
L203	U/F	nsp	COIL AM ANT2	*TC000360R
L204		9965 000 01482	COIL AM OSC	*LO000080R
L205	N	9965 000 01483	COIL LW OSC	*LO000070R
L206		9965 000 01484	COIL 5.4 mH	*LC107260R
L207		nsp	COIL AXAIL 27 μH J	nsp
L302		4822 157 11487	COIL MPX	*LS000060R
L303		4822 157 11487	COIL MPX	*LS000060R
L701		9965 000 01235	COIL INDUCTOR 100 μH	*TC000350R
			SWITCH	
S501		4822 276 14107	SW TACT	*SP000880R
			MISCELLANEOUS	
BN11		nsp	WIRE ASS'Y	nsp
BPF1	N	9965 000 01474	BPF	*FF100240R
CF22		9965 000 01475	FILTER CER. SFG450E	*FF100280R
CN72		nsp	WAFER MOLEX 5267-07A	nsp
CN91		nsp	WAFER	nsp
CN92		nsp	WAFER	nsp
CT21		4822 125 11116	CAP VARIABLE	*CT000110R

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
CT22	N	4822 125 11116	CAP VARIABLE	*CT000110R
FP11	N/U	9965 000 01266	PACK FM FTA4460H	*AV000060R
FP11	F	nsp	PACK FM (JAPAN) FTA4508HJ	*AV000090R
JK11		9965 000 01477	TREMINAL,ANT (T/C 75 OHM)	*YT001630R
JK12		9965 000 01478	JACK 3P(R/W/O) DJB-573(NI)	*YT001840R
JK13		9965 000 01479	TERMINAL FM ANT (75 OHM)	*YT001830R
JW12		nsp	WIRE ASS'Y	nsp
TP11		nsp	WIRE COPPER	nsp
TP12		nsp	WIRE COPPER	nsp
TP13		nsp	WIRE COPPER	nsp
T101		9965 000 01485	IFT FM1	*LI000110R
T102		9965 000 01486	IFT FM2	*LI000120R
T201		9965 000 01487	IFT AM1	*LI000090R
T202		9965 000 01488	IFT AM2	*LI000100R
T203	F	nsp	IFT AM	*LI000080R
X201		4822 242 82242	RESONATOR LZU450C4N	*FF100190R
X202	F	nsp	RESONATOR CSA3.60MGF103	FQ03604020
X301		4822 242 11061	RESONATOR ZTB456F11	*FQ000390R
X601		4822 242 72333	CRYSTAL 7.2 MHz	JX07001261
X801	N	4822 242 11042	CRYSTAL 4.332 MHz	*JX000540R